The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 629.---Vol. XVII. LONDON, SATURDAY, SEPTEMBER 11, 1847. [Price 6d.

GREENWICH HOSPITAL.

SALE OF LEAD ORE, AT ALSTON MOOR, CUMBERLAND.

The FOLLOWING PARCELS OF LEAD ORE—viz.:

		Computed Weight.
At Nent Head Receiving House	No. 1	308 bings.
„ „ „	„ 2	49 „
„ „ „	„ 3	84 „
At Hudgill Burn Receiving House		61 „
At Low Byer Receiving House	No. 1	166 „
„ „ „	„ 2	116 „
„ „ „	„ 3	46 „
Total		780 bings of 8 cwts. each.

Samples of the ores are now ready, and will be forwarded to any parties wishing to purchase, who may not appoint agents to examine them, on application to Mr. Paull, Alston, Cumberland.

Tenders for the purchase of the above parcels of ore, together or separately, will be received by Mr. Grey, at the Low Byer Inn, Alston, up to Twelve o'clock of Thursday, the 16th day of September, 1847.

Conditions of sale may be had on application to Mr. Grey, at the Greenwich Hospital Office, Dilston, Newcastle-upon-Tyne.

Purchasers may have the ores smelted at the Hospital's mills, at Langley, if required. 1

LEAD MINE, at KNOCKIBED, in the county of WIGTOWN, SCOTLAND, TO BE LET, for 19 years.

—This mine was worked with success about 60 years ago, and the workings having been lately cleared out by the Earl of Stair, the proprietor, the appearances are most promising. Lead mines have lately been opened with great promise in the adjoining district of Kirkcudbright; and, if capital and mining knowledge were applied in Wigtownshire, that county might become, as it is in geographical appearance, the Cornwall of Scotland.

Apply to Mr. Guthrie, Rephad, by Stranraer, chamberlain to the proprietor.
Rephad, August 25, 1847. 2

VALUABLE MINING MATERIALS FOR SALE.—

TO BE SOLD, BY PRIVATE CONTRACT, at ROUGHTEN GILL MINE, in the parish of CALDBECK, CUMBERLAND, the following valuable

MINING MATERIALS—viz.:

An excellent CRUSHING-MILL, with a shaking apparatus annexed; double and single washing tubs, with sieves and stangs; double and single trunks, slime apparatuses, dolly tubs, buddles, waggons, barrows, shades, a quantity of timber and planks, iron and metal plates, scales, beam and weights, bedsteads, bellows, anvils, small pump, windlasses, rope, chain, kibbles, water tubs, and a great quantity of other useful mining and other materials.

For viewing the same, apply to Mr. George Brown, Fellside, near Caldbeck, aforesaid; and for further particulars, to Mr. J. C. Cain, mining agent, Alston, Cumberland.
Dated Alston, Sept. 1, 1847. 3

WHEAL GILL.—FOR SALE, BY PRIVATE CONTRACT,

a 50-inch cylinder PUMPING-ENGINE, constructed on the most improved principle, by Hocking and Loam, with boiler, &c., complete—erected in 1845; has had but little work, and can be warranted perfect. Also, grinder, balance-bobs, whims, capstan, 9, 12, and 18-inch pumps, windbores, doorpieces, H-pieces, 9-feet 12-inch plunger-pole, with case, &c., complete; whim and rod sheaves, kibbles, smiths' and miners' tools, flat-rods, and a great variety of other mining materials, in the best condition.

To view, and for other particulars, application may be made to Capt. N. Faull, on the mine.—Wheal Gill, near Liskeard, Sept. 1, 1847. 4

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES,

ONE 24-inch STAMPING-ENGINE, 9 feet stroke, boiler, 11 tons.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage.
SIX TUBULAR BOILERS, 11 tons each.
A large IRON BALANCE-BOB, 12 tons.

Application to be made to Capt. R. Williams, on the mines.
Dated Godolphin Mines, Helston, Cornwall, August 9, 1847. 5

BUILDING MATERIALS, AT THE EAGLE WORKS, TIPTON.—

TO BE SOLD, BY PRIVATE CONTRACT, a large quantity of valuable BUILDING MATERIALS, consisting of BRICKS, TIMBER, SLATES, and TILES. The whole are to be removed, in consequence of the site of the works being required for railway purposes.—For particulars, apply to Mr. George Payton, at the works. 6

TO IRONFOUNDERS AND OTHERS.—TO BE SOLD,

BY PRIVATE CONTRACT, a powerful BLAST-ENGINE, steam cylinder, 42 in., and blowing cylinder, 78 in., diameter, complete.

A 20-horse CONDENSING-ENGINE, with strong boiler, nearly new.

A very complete BORING-MILL, with strong lathes and face plate, and Loam and Blacking Mill attached.

A very superior wrought-iron overshot WATER-WHEEL, 12 ft. diam., and 3 ft. wide.

A 15-feet GASOMETER.

Also, a large quantity of MOULDING BOXES and CORE BARS, valuable PATTERNS, and various OTHER EFFECTS, which may be viewed on application to Mr. Geo. Payton, at the Eagle Works, Tipton. 7

DUDDINGSTONE AND BRUNSTAIN COAL-FIELDS,

near EDINBURGH, TO BE LET, as detailed in former advertisements. The SEAMS OF COAL are numerous, and BLACKBAND IRONSTONE may be expected in the lands, similar to that which has been recently discovered at Gilmerton, Dryden, and Greenlaw, in the same range of coal strata. Excellent LIMESTONE is known in the lands.—The near vicinity to the City and Portobello, besides other markets now opened by railway, and also the harbours of Leith and Fisherrow, with all which the existing railway, passing through the estate, connects, renders it how very eligible for colliery operations. There are two steam-engines, and other colliery machinery, at the pits, one of which is nearly sunk to the Jewel Coal.

Offers for a lease to be addressed to Mr. Geddes, 49, Albany-street, Edinburgh.
July 29, 1847. 8

STRONG MIXING PIG-IRON.—The YSTALYFERA

IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *defective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address —THE YSTALYFERA IRON COMPANY,
Dated June 22, 1847. *Near NEATH, SOUTH WALES.* 9

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS.

— DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.
Dated June 22, 1847. 10

PATENT GALVANISED IRON AND WIRE ROPE WORKS,

MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for coating. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 11

ADCOCK'S PATENT SPRAY PUMP.—This important

INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 4d. 12

THE PATENT SAFETY FUSE,

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 13

(PROVISIONALLY REGISTERED.)

ALBION PLATE GLASS COMPANY.

Capital £100,000, in 4000 shares, of £25 each.
Preliminary deposit, 2s. 6d. per share, until complete registration.

TRUSTEES.

MATTHEW FORSTER, Esq., M.P., New City Chambers.
CAPT. CHARLES EDWARD MANGLES, Guildford.
GEORGE FREDERICK YOUNG, Esq., Limehouse.

DIRECTORS.

HENRY CORNFOOT, Esq., Old Palace, Richmond.
JOHN KNILL, Esq., London-bridge Wharf.
SAMUEL SHARP, Esq., Albury, near Guildford.
CORNELIUS SMITH, Esq., Gracechurch-street.
EDWARD SMITH, Esq., Old Broad-street.
FREDERICK YOUNG, Esq., Bromley, Middlesex.

MANAGER—Mr. Henry Howard.

AUDITORS.

Wm. Bagshaw, Esq., Coleman-street; John Adams Carter, Esq., Leadenhall-street.

BANKERS—The Commercial Bank of London.

SOLICITORS—Messrs. Shearman and Slater, No. 23, Great Tower-street.

SURVEYOR—John Morris, Esq., No. 58, Fenchurch-street.

SECRETARY—Henry Shearman, Esq. 14

In the year 1836 the manufacture of plate glass in Great Britain was about 7000 feet per week: the sales are now about 70,000 feet per week, exclusive of foreign. The demand is increasing beyond all precedent; and, although some of the houses are working *night* and day, the supply of good quality is still inadequate for home consumption alone.

From 1827 to 1847, the reduction in price has been from 12s. to 5s. p. foot, or 60 p. ct.

From 1827 to 1847, the increase in consumption has been from 5000 to 70,000 feet per week, or 1400 per cent.

This company has been formed to afford a better, and, if possible, a sufficient supply, and thereby to revive and encourage the export trade in this article, which might be carried to an enormous extent, but which, in the present state of supply and demand, is grievously neglected.

The profit now realised in this manufacture in England is about 20 per cent., but the present company, by a superior application of machinery, and the adoption of important scientific improvements (to be patented for their especial benefit), will be enabled not only to construct their works at little more than half the cost of similar undertakings, but also to carry them on at a decreased permanent charge; and, by these means, this company will be placed in a position of vast superiority over any existing establishment.

Freed, as this rising trade now is, from Excise restrictions, and looking at the extraordinary results that have already arisen, it is impossible to foresee either the extent to which this manufacture may be carried, or the full amount of advantage to be derived from its more extensive development. Nor is it unworthy of remark, that, in this country, slabs of the finest plate glass may be produced at a cost considerably below that of statuary marble.

The locality of London presenting peculiar advantages, arrangements have been made for the purchase of an eligible site of freehold land on the banks of the Thames, and other important steps are taken, whereby the works may be completed, and in full working operation within 12 months.

This undertaking is brought forward, not only as a safe and extremely valuable investment for capital, but also as one which the public interest imperatively demands, and a large amount being already subscribed, the remainder will be apportioned to respectable parties, who may apply to the secretary, at the offices of the company, No. 4, Railway-place, Fenchurch-street, where, or of the solicitors, No. 23, Great Tower-street, prospectuses and any further information may be obtained.

THAMES ECONOMICAL STEAM-BOAT COMPANY.

(REGISTERED PURSUANT TO ACT OF PARLIAMENT.)

ESTABLISHED ON THE PRINCIPLE OF CHEAP AND EQUALISED FARES.

Capital £40,000, in 8000 shares, of £5 each,

On which £2 per share will only be called until after a meeting of the shareholders, approving of a further call to extend the operations of the company.

No call to exceed 10s. per share.
The shares may be paid by instalments.
Each shareholder to receive a bonus of free passage.
Tickets to the full amount of paid subscription. 15

TRUSTEES.

GIDEON COLQUHOUN, Esq., director of the Colonial Assurance Company, and chairman of the Asturian Mining Company, Walmer Lodge, Regent's-park.
CHARLES COLLETT, Esq., Hammersmith.

DIRECTORS.

J. P. SOMERS, Esq., M.P., Full-mall, and Sligo.
J. BERNARD, Esq., Gravesend, and Palace Ann, Ireland.
GEO. HUMPHREYS, Esq., 6, Throgmorton-street, City.
THOS. MERCHANT, Esq., 42, Lombard-street.
CAPT. W. SMITH, R.N., Westbourne Grove.
EPHRAIM EVANS, Esq., 8, St. Martin's-place.
T. W. WARE, Esq., Brompton, Middlesex.

AUDITORS.

Mr. Horace Bell, 28, Craven-street, Strand.
Mr. Alex. Field, 6, Bridgewater-square.

SOLICITOR—Frederic Talbot, Esq., 47, Bedford-row.

ENGINEER—Mr. R. Fell, Broad-street, City.

BANKERS—Messrs. Hanbury and Co., Lombard-street.

The object in promoting this company is to provide for the public a safe and economical steam communication from London-bridge to Chelsea, Battersea, &c., and from London-bridge to Greenwich, assisted by all the advantages which improved science can suggest.

The company will run express boats morning and evening.

A considerable portion of the shares having been subscribed for, application for the remainder may be made at the offices of the company, 134, Upper Thames-street; or to the solicitor, 47, Bedford-row, where prospectuses and plans may be obtained, and every information furnished. By order of the board, J. BECKET.

GENERAL MINING MART AND CLUB HOUSE, LONDON.

The MINERAL PRODUCTIONS of the WORLD are computed to be of the annual value of upwards of £64,000,000—one-half of which is raised in Europe alone. But facts regarding mining and geology, with the most approved modes of analysing and profitably separating mineral products—the results of practical experience—have no common concentration or abiding place; nor have mining results, varying, as they confessedly do, with the variations of the strata, any acknowledged repository beyond the shelves of a few provincial institutions.

LONDON—the focus of business appertaining to the empire and the world—the seat of most mining companies, and where almost all of them receive support and encouragement—has no public institution—*no locus standi*—to which the shareholder, the agent, the inventor, the practical miner, or the possessor of valuable mineral property, can have access to, either to afford or obtain information.

It is proposed, therefore, to form an institution in London, to be called— 16

"THE GENERAL MINING MART AND CLUB HOUSE,"

accessible to members on payment of £4 4s. per annum. From and after Christmas next, an entrance fee of One Guinea will be required beyond the subscription.

The advantages to be derived from the institution will be these:—

The letters of every member will be received there, and his address in London always known to his family and other correspondents.

He will have a place to transact his business, make and keep his appointments, write his letters and post them; and, for these purposes, there will be private boxes, as well as public rooms.

There will be all the mining and leading journals of the day, with such other interesting publications as shall be decided on.

The refreshments will be charged at little more than cost price—being a saving of full 25 per cent.—and no fees will be payable to servants. Every facility afforded for going to and from the railway trains, and for visiting places of business and amusement in London.

In fine, this institution will afford to the member, as soon as he reaches London, the means of finding himself in the society of his friends, or others of congenial taste, with all the ease, but less expense, of an inn. It will be open to *one and all* of its members, combining all the conveniences of a club, but independent of all political, party, national, or local feeling.

For mining business appropriate rooms will be set apart, and every facility afforded in the formation and extension of mining companies—the conduct of their business—the holding their annual or other meetings, and the sale and purchase of shares. The charges for these will be on a regulated and moderate scale, and will only concern those who shall desire the transaction of such business.

No responsibility of any kind is to be incurred by the member beyond the amount of his annual subscription; and he may withdraw at any time by giving half-a-year's notice, and paying up his subscription to the proposed time of quitting.

It is confidently expected that, in addition to the ordinary members, support will be given to this institution by the noblemen and gentlemen resident in, and representing, the counties and boroughs in the mineral districts, as also by the lords of the mineral soil generally, and by parties who have greatly benefited by mining, and possess mining influence. As the avocations of these noblemen and gentlemen will undoubtedly preclude the favour of frequent visits, it is trusted that they may still honour the proposed institution with their patronage and support, by becoming Life Honorary Members, paying a present subscription of Ten Guineas in lieu of all annual subscriptions, which will entitle them to all the advantages of the institution, and constitute them, *ex facto*, members of the committee, should they desire it.

Subscriptions from mines will entitle any one of their accredited proprietors or agents to the advantages of the institution.

Letters for further information and applications for admission to be addressed to Mr. J. G. Beckerleg, 18, Cornhill; to Messrs. Crossman, Sommers, and Co., 28, Threadneedle-street; or to Mr. R. Tredinnick, Three Kings'-court, Lombard-street, London, where detailed prospectuses may be obtained; prospectuses can also be had at the *Mining Journal* office, 26, Fleet-street.

WANTED, TWO PRACTICAL MINE AGENTS, to

SUPERINTEND the MANAGEMENT of TWO MINES in CORNWALL.
Apply by letter (pre-paid), to Mr. P. Rabey, jun., Queen's Arms Hotel, Cheapside, London. 17

WANTED TO PURCHASE, A STEAM-ENGINE, with

FLY-WHEEL and BOILER, complete: cylinder from 8 to 10 inches.—Apply (by letter), stating particulars and the price, to Mr. C. B. Dyer, Parys Mine, Amlwch, North Wales. 18

STEAM-ENGINE WANTED, a PORTABLE 20-horse power

HIGH and LOW PRESSURE STEAM-ENGINE—required immediately, in good working condition.—Apply by letter (pre-paid), to Sarah Simmons, engineer, &c., 25, Stoney-street, Borough Market. 19

FOR SALE—The WHOLE, or ONE-HALF, INTEREST in

a COPPER and SILVER-LEAD MINE, in North Wales.—Apply to Capt. John Jenkins, Aberdovey, Merionethshire, who will give every information respecting the mine. 20

TO CAPITALISTS, ENGINEERS, AND OTHERS.—

The ADVERTISER has an INVENTION of the greatest IMPORTANCE to the ENGINEERING WORLD, which is favourably considered by competent judges, and would realise a fortune to those interested: he would be willing to arrange with any party *to patent*, and carry out, the same, on favourable terms.—Apply to "W.," care of the Editor of the *Mining Journal*, 26, Fleet-street, London. 21

WILSON & FRASER, 2, WELLINGTON-BUILDINGS,

LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 22

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.

N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 23

WILLIAM H. SMITH, MINING SHARE AGENT,

10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.* 24

MR. R. TREDINNICK, MINING AGENT AND DEALER

IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON. 25

JAMES LANE, MINING SHARE DEALER,

75, *OLD BROAD-STREET, LONDON.* 26

RICHARD BOOT, ACCOUNTANT, MINE AND RAILWAY

SHAREBROKER, COMMERCIAL AND GENERAL AGENT,
REDRUTH. 27

BRITISH MINING OFFICES, 41, MOORGATE-STREET,

LONDON.—PROSPECTUSES may be had, and ORIGINAL SHARES ALLOTTED in the COPPER and SILVER-LEAD MINES connected with these offices, on application to the secretary, THOS. HENRY TAUNTON. 28

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers,

inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.
6, Bank Chambers, opposite the Bank of England. 29

ORIGINAL REGISTRY OFFICE, FOR THE SALE AND PURCHASE OF MINING SHARES.

No. 28, THREADNEEDLE-STREET, LONDON.

CROSSMAN, SOMMERS, AND CO., AGENTS.

SHARES FOR DISPOSAL.

Devon and Courtenay Consols	Fennant
East Wheal Rough Tor	South Wheal Maria
Great Wheal Frederick Tin Mine	South Wheal Sophia
Great Wheal Rough Tor	Victoria Tin Mining Company
Grambler and St. Aubyn	Wheal Susan
New East Crowndale	West Wheal Rough Tor
North Wheal Camel	Wheal Esse
Princess Royal	&c. &c. &c.

30

DYFNGWM LEAD MINES, NORTH WALES.

CONDUCTED ON THE COST-BOOK SYSTEM.
OFFICES—33, OLD JEWRY.
Where sections and plans of the mine may be seen, and all information obtained. 31

GEORGIA TIN MINES, divided into 2048 shares, and worked

ON THE COST-BOOK SYSTEM.

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen. 32

GREAT SOUTH TOLGUS MINING COMPANY.—Notice

is hereby given, that a SECOND CALL of TEN SHILLINGS per share has been made this day on each share, and that the same must be PAID on or before the 29th day of Sept. next, to the credit of the company, at Messrs. Glyn, Halifax, and Co., bankers, London; or to the Borough Bank, Liverpool. By order of the board,

Dated Liverpool, Sept. 7, 1847. ROBERT TAYLOR, GEORGE WOOD, } Directors 33

TINCROFT MINING COMPANY.—Notice is hereby given,

that a GENERAL MEETING of the shareholders in the above company will be HELD at this office on Thursday, the 30th inst., at Two o'clock precisely.
44, Finsbury-square, London, Sept. 8, 1847. 34

MENDIP HILLS MINE COMPANY.—At the Second Annual General Meeting of shareholders, held at the offices, Finsbury-square, on

Friday, the 10th inst., P. STAINSBY, Esq., in the chair,

The following resolutions were passed unanimously:—

Proposed by Mr. R. James, seconded by Mr. Fowler.

Resolved.—That the reports and accounts now submitted and read, be received, adopted, and entered in the cost and transfer book.

Proposed by Mr. Herron, seconded by Mr. Lee. 35

Resolved,—That Messrs. Trenery and Matthey, by whom the present accounts have been audited, be elected auditors for the ensuing year.

Proposed by Mr. W. Trenery, seconded by Mr. Herron.

Resolved,—That such shareholders as are in arrear of more than one call, be informed that if such arrears are not paid up within 21 days from this date, legal proceedings will be taken against them to enforce the same, and that a copy of this resolution be sent to them.

Proposed by Mr. W. Trenery, seconded by Mr. Barwell.

Resolved,—That this meeting take the opportunity of expressing their satisfaction of the attention paid by Capt. Harpur to the affairs of the company.

Proposed by Mr. Newcomb, seconded by Mr. James.

Resolved,—That the thanks of this meeting be presented to the chairman and directors, for their diligent attention to, and general management of, the company's affairs.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to

inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual. 36

BRUNTON'S PATENT ORE-DRESSING FRAME.—

These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grace; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines. 37

THE PATENT OFFICE AND DESIGNS REGISTRY,

No. 210, STRAND, LONDON.

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

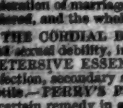
Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street). 38

SCIENCE *v.* IGNORANCE.—"DEALINGS WITH THE DEVIL."—Happening to be in Taunton on the day of nomination for West Somerset, and having heard much of Mr. Escott's ability as a public speaker, I took my station opposite that part of the hustings appropriated to him and his friends. Immediately on the gentleman who came forward to oppose Mr. Escott commencing his address, a respectably-dressed and well-to-do looking farmer near me, assisted by a few others, apparently his neighbours, set up a howl that would have been no discredit to a whole kennel of fox-hounds. On my inquiring of the farmer who the gentleman was, and what he had done to be thus assailed, as I heard nothing in his address to call for it? he replied, "You don't know him, Sir—it's old Crosse, of Broomfield. He ought to have been hanged years ago." "For what offence?" inquired I. "For dealing with the devil, Sir," was the reply: "he has raised the devil at his cursed house four or five times, to my certain knowledge, and the last time he was near setting the house on fire. I believe he has not tried it on since; but there is no going near the place after night for his vagaries." On further inquiry in another quarter, I found the gentleman thus spoken of to be no other than the celebrated Andrew Crosse, who has gained himself a European fame by his discoveries in electricity and galvanism. I remember to have read, in a work on demonology, that some 200 or 300 years ago various executions took place in Somerset for witchcraft, but really such a discourse as that above detailed, in the 19th century, passes belief; and I much fear that, if Mr. Crosse were brought before a jury of his wise neighbours for the same offence, he would hardly escape.—Correspondent of the *Taunton Courier*.

COALS, CINDERS AND CULM.—A return has just been issued (in pursuance of the order of the House of Commons, dated June 17) relative to the number of ships laden with coal, cinders, and culm, that for the last six years have entered outwards from this country. It is stated therein that, in 1840, the number of British vessels so laden that entered outwards at the several ports of the United Kingdom was 5275; and of foreign ships, 3820. The amount of duty from the former was 1539*l.* odd; and from the latter, 555*9l.* In 1844, the number of British ships was 5954; and of foreign ones, 4095: and the duty received from the former, 73,655*l.*; and from the latter, 40,525*l.* During the year 1846, the number of British ships was 7223; and of foreign vessels, 5578.

STEAM-POWER.—It appears, from a recent official return, that the total number of steam-engines in France, in 1845, was 207; in 1840, it was only 109.—Another return, respecting the produce of the iron mines, states that, in 1845, the quantity of iron cast was 439,000 tons; whereas, in 1825, the quantity was only 190,000. The price of bar-iron, which in 1825 was 48 fr. the 100 kils., was, in 1845, only 34 fr.

A SEVERELY BRUISED AND WOUNDED LEG CURED BY HOLLOWAY'S OINTMENT AND PILLS.—Mr. Hugh M'Neil, of Kincardine, a shipwright, when working on a vessel, struck his leg a most violent blow, which inflicted a dreadful wound and a severe bruise; the limb immediately turned black, from the ankle to the hip. All applications to it for weeks had no power to heal the wound or disperse the bruise. The sufferer having heard so much in praise of Holloway's ointment and pills, determined on trying them—and, fortunately, he did; for, by their use alone, his leg was cured, and in a month he was able to resume his work.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London. 59



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THE COPPER DUTIES QUESTION.

TO THE EDITOR OF THE CORNWALL ROYAL GAZETTE.

SIR,—At the close of my letter of 2d inst. [inserted in the *Mining Journal* of 28th], I referred to the six Parliamentary returns to Sir C. Lemon's motions of 4th June, respecting the imports and exports of copper and copper ores, from 1824 to 1846; and the duties severally payable upon them, from 1808 to 1846, which have just been printed. On referring to one of those returns (No. 3 of the series), it appears to me that it is not made in conformity with the motion, which asks for "An account of the total quantities of British copper (exclusive of copper ore), and of foreign copper that may have paid duty, estimated by weight, and the total amount of brass and copper manufactures, estimated by value, which have been exported from the United Kingdom in each year, from 1824 to 1846, both inclusive; distinguishing the quantities exported to France and the United States respectively, from those exported to all other parts."

Perceiving a considerable discrepancy between the returns made, and the quantities stated by me to have been exported to the United States, in my letter of the 9th July, inserted in your paper of the 16th July, I have turned to the official accounts in my possession, for each of the separate years from 1838 to 1846; and I find that the quantities, as given in that letter, are strictly correct; the differences between the returns now made, and the account embodied in my letter proceeding from the fact, that sheet copper, nails, &c., shipped in the years 1838 to 1846—which constitute 11,600 tons out of the total exports of British copper, amounting to 12,993 tons—are wholly omitted in the return now presented, under those heads, although they may be included under the separate head of "brass and copper manufactures," given by value; which would, in fact, leave the relative proportions for different years the same as I have stated them.

I repeat that the statement, as originally made by me on the 9th July, is *rigidly correct*; and I should not have adverted at all to the matter, had not one of your contemporaries, in an article referring to these returns, so placed the figures as to produce, upon a cursory reading, the impression, that the trade with the United States, and some other countries, had largely fallen off; and the figures calculated to produce that erroneous impression are followed up by reasoning as destitute of truth, as the facts upon which it is founded are wanting in accuracy. So entirely have I, in my former communications to you, anticipated all the leading facts with respect to the state of the copper trade, regarded in almost every point of view; and so completely, where accurately given, have the returns before me confirmed my statements, that I am saved the necessity of further addressing you, at any length, upon the several branches of the question, and I shall, therefore, content myself with very few additional remarks; one of which, however, will refer to a brief extract from the present returns, showing the real state of the case, with respect to duties payable upon imported ores, upon which point the Liverpool committee have strongly asserted, that "duties were first imposed by the tariff of 1842."

I will shortly copy, from the official return now before me, the duties payable upon copper ores from 1808, down to the present time, a period of 39 years.

		£	s.	d.
1808, from 5th July, the duty per ton of ore was		0	13	7
1809, from 5th July,	ditto	0	13	4
1812, from 9th July,	ditto	20	13	4
1819, from 8th July,	ditto	20	15	10
1835, from 5th July,	ditto	12	0	0
1840, from 9th May,	ditto	12	12	0
1842, from 9th July, per ton of metal, according to the richness of the ore, from				
3*l.* 3*s.* to 9*l.* 6*s.*—equivalent, for the 4 years, to an average, per ton of ore, of		1	2	11¼
The actual duty paid being, per ton of ore, in the year 1843		1	3	8½
" " "	1844	1	5	8
" " "	1845	1	0	10½
" " "	1846	1	1	2½

And yet, in the face of these plain facts, have the Liverpool committee, and all their partizans, throughout their memorials, and other representations to the various departments of Government, as well as in those of their communications more immediately intended for the public eye, constantly asserted, that duties were first imposed upon copper ores by the tariff of 1842! But the question is fairly open to be considered in another point of view—since the foreign ores are imported in a much richer state than Cornish ores are raised, the average produce in metal being—

Years.	From Foreign Ores.	From Cornish Ores.
1843	21·43 per cent.	7 6-16 per cent.
1844	22·51 "	7 12-16 "
1845	19·90 "	7 13-16 "
1846	20·92 "	8 1-16 "
Average of the four years	21·21 per cent.	7 8-4 per cent.

Therefore, the average duty of 1*l.* 2*s.* 11¼*d.* per ton of ore, paid for the four years by foreign ores, is equivalent only to 8*s.* 4¼*d.*, taken with relation to the respective degrees of richness of foreign and Cornish ores; and this mighty charge is the cause of the violent outcry of the importers and smelters! A question, nevertheless, of much moment to the English miner; since I distinctly showed, in my last letter, that the average profits of all the copper mines of Cornwall, are barely equivalent to the duty paid upon foreign ores—a declaration by which I am prepared to abide, taking the figures last given as my standard.

I am not aware of any other part of the returns just published calling for especial comment. But there is a question, upon which I will make a short observation; and which would, perhaps, have more properly appeared at an earlier period of this correspondence, when considering Mr. Muntz's late motion in the House of Commons.

The debate, on that occasion, was not, I think, very fully or accurately reported; but, as far as my recollection serves me, some honorable Member is reported to have observed, that the withdrawal of the duty would throw the British miner out of work, and enable the foreigner to supply copper 10 per cent. under what the British miner could raise it for. That the first part of that remark, if it were so made, would prove strictly correct, and especially with respect to the deep mines of this county, I think I have already sufficiently shown in my former letter. But I advert to the subject for another, and, in my judgment, a very important reason; although, from circumstances, it may be said to apply more forcibly to the state of things before 1842 than since.

It was one of the conditions of the permission to smelt copper in bond, that the computed produce of the ores, in metal—or, at least, a weight of copper equivalent to that so computed to be yielded by the foreign ores—should be exported *within a stipulated period*. It not unfrequently happened, during the 12 years that this law was extensively acted upon, that the natural demand from abroad was too limited to admit of that condition being complied with, advantageously to the exporter from hence. In these cases, the smelters, or some of them, being compelled to export the required quantity, found themselves situated with supplies abroad greatly exceeding the actual wants of the foreign consumers—in fact, with a glutted market; and sales could only be forced, at a sacrifice. It will not be denied—since the fact is too well known to admit of disproof—that, on such occasions, large reductions in price were submitted to abroad; many such sales, and to a considerable extent in quantity, having been effected, out of England, at prices often from 8*l.* to 10*l.* per ton less than the prices which the same parties were charging, for similar copper, to the manufacturers in England, at corresponding periods of time. It was, naturally enough, their policy to sustain their prices in the British market, that of the largest consumption; and to make their sacrifices, when requisite, at other and distant points. I will not stay to inquire here, how much of the loss sustained by such forced sales, was covered by the large and unreasonable deductions made by the smelters from the value of ores bought by them, under the head of "returning charges;" or the advantages gained in the assays; or in the 5 per cents. given in the weight, the 21 cwts. to the ton; or from any other of the "cent-ish ends and cheese parings," which their monopoly throws into their unchecked power. It is well understood that large reductions may be made from the smelters' quoted prices, before any inroad is made upon the actual cost. These matters I will leave for consideration by others, or maybap, for future discussion by myself; but I may ask the manufacturers of Birmingham, Wolverhampton, or elsewhere, whether, when they were signing memorials, or taking other steps to obtain a change, it ever entered into their contemplation to compute the effect produced by copper being supplied, through English smelters, or their mercantile connections, to their (the manufacturers') continental rivals, in a fit state for immediate manufacture, at 10*l.* per ton less than *they* were paying to the same parties for it in England? And I may further ask, whether they can bring themselves conscientiously to believe, that the apprehensions expressed by the importers and smelters, with regard to smelting out of England, and its consequences upon our interests generally, and their own in particular, are anything but phantoms of the brains of their promulgators, held or exhibited, *in terrorem*, for purposes well understood by those who create them? It would be an imputation upon the soundness of the understanding of the manufacturers, when a calm appeal is made to them, to hesitate in believing what would be their reply.

At whatever length I may have considered this subject, much still remains to be said upon many branches of it; among other things, upon the surreptitious and unwarrantable manner in which evidence was admitted, touching the copper duties, before the Committee on the Navigation Laws, and the extraordinary and exaggerated statements of the Budd's and Brownell's thereupon; but of this, and other matters applicable to the question, I will defer the consideration for the present, and I can well imagine that it will be a relief to your readers, as well as to yourself, to learn, that I have now brought to a close my remarks upon a subject which has lately occupied so much of your space. For your courtesy, in assigning to them so many of your columns, I beg you to accept my thanks; I believe that you have done it willingly, and from a conviction that, as the highest interests of the county of Cornwall are involved in the issue of the question, you would best discharge your duty, as a journalist, in giving publicity to whatever might show, in a clear and satisfactory manner, in what those interests really consist. The copper miners of England, and especially of Cornwall, will doubtless appreciate the exertions which you have made in support of its chief staple commodity.

For myself—repeating my declaration that I have not an interest, to the extent of a single shilling, in any copper mine in, or out of, England—I may say, that I have investigated the subject in a spirit of truth, and not of exaggeration, in any respect. My object has been to collect, collate, and give publicity to facts; and to those facts, fairly stated, to apply such reasoning as my imperfect powers might enable me to do.

I have met—I hope fairly, I know fearlessly—the language and statements of those whom I have, more than once, designated in letters—truly so, I believe—as the *Anti-British-Mining League*. I have endeavoured to show, with what success each of your readers having access to correct data, and competent to judge, will decide for himself—that the several complaints put forth by that league, as well as the greater portion of their alleged facts, have little or no solid foundation, in truth; that the alarms about foreign smelting are destitute of all reason, as the complaints of the ore-exporting countries, with respect to our duties, are of all justice, if one and the same rule be the standard of justice in those countries and our own; that the alteration of 1842 has had no injurious effect upon any portion of our trade with those countries supplying us with ores, if fair averages of amount for a certain number of years be taken for the purpose of comparison; but that, on the contrary, the imports from, and exports to, those several states have, with one or two very trivial exceptions, however they may be computed, largely increased; and, taking an average of an equal number of years before, and since, 1842, they have *invariably* increased, and in most of them to a great extent; and that, carrying the inquiry still further back, the increase, on all hands, may be fairly described as enormous; and further, that the amount circulated in this country from the payments made to British subjects employed in the mines abroad, or expended here for materials consumed in those mines, is perfectly contemptible, when compared with the corresponding items of expenditure upon the mines of this country; and that the vaunted numbers of British subjects interested in the foreign mines, consisting of a few hundred labourers abroad, and a score or two of merchants and smelters at home, when put in comparison with the scores of thousands, of all ranks, who are dependent, for their well-being, upon the prosperity of the British copper mines, are still more insignificant—these, and various other considerations I have established, to my own conviction at least, in favour of our own country, and our own mining interests.

If that be so, and if, as I maintain, it is the plain and imperative duty of the Legislature, and the executive, to sustain interests of so strong, so numerous, and so essential a character, I would ask, how it can be, for a moment, tolerated, that property so enormous as that engaged in British mining industry, numbers so large as those employed in its prosecution, and consequences, in every sense, of so vital a character as those which impend over changes affecting injuriously that property, and so large a number of our fellow-subjects; I would ask, I say, how it can be tolerated, or how any Government, having the general welfare of the country at heart, can permit that such extensive and important interests should be trifled with in the way that has been attempted upon this question. Be it under the name of revenue, or be it called protection, I care not a straw; but I do maintain, that it is the bounden duty of the British Government to take especial care that interests so vast and overwhelming shall not be trifled with, or frittered away, to advance any new-fangled doctrine, or minister, to the greedy appetite for wealth of a small but combined body, bent upon the advancement of their own pecuniary position, at any and all sacrifices of partial or national considerations; and I equally maintain, that it is the bounden duty of the entire population of our mining districts, and especially of the people of Cornwall and Devon, to put their shoulders to the wheel—one and all, and manfully to fight the coming battle, as much for their own welfare, as for that of their common country, which hangs, to a greater extent than may be, at present, supposed, upon the issue of that contest.—PUBLIUS: *London, August* 16.

EVIL CONSEQUENCES OF THE MINERS' COMBINATION.

We adverted recently to the evidence furnished by the reports of the education and mining inspectors of the moral and intellectual condition of the labourers in mining districts, and to the dangers to which the general order and peace of society are exposed from the ignorance of that class. The evils to which the same cause gives rise in commercial and industrial operations, and to the extent to which miners and colliers are even now jeopardising the prosperity of the trade by which they live, from erroneous notions of their own power to regulate it, are not less worthy of observation. The fallacies of commercial restriction, having been pretty well driven from the intelligent mind of the country, still find acceptance, and are still practically acted upon, by the uneducated men who work in the ironstone shafts and coal-pits of Lanarkshire, Lancashire, Cheshire, and South Wales. The consequences are, a serious obstruction to the various branches of trade dependent upon the supply of coal and iron, and a liberal premium given to the production of those articles in foreign countries, as well as to all branches of foreign manufacture, which can be enabled, by cheaper iron and coal, to enter into competition with English industry.

From the report of Mr. Tremenheere, already referred to, it appears that the working of the mines in Lancashire, Cheshire, and Lanarkshire, is regulated by a Miners' Association, numbering between 20,000 and 30,000 members. The association is directed by a committee of management, consisting of a president, secretary, and treasurer, all of whom are working men. John Hall, the secretary of the association, informed Mr. Tremenheere that "The combination enables the colliers to regulate the markets, and to raise the price of coals. The price of coal has been raised 5*s.* or 6*s.* per ton, where the restriction has been adhered to. The colliers of Lancashire are earning 4*s.* a day on an average, working five days in the week. They are about nine hours down the pit." The same witness admitted that the high price of coal for the last four years had caused many new collieries to be opened in Lancashire, especially in the neighbourhood of Wigan. The natural consequences of this artificially increased supply, in ultimately producing a corresponding depression of prices and slackness of employment, appear to have been pointed out to him by the inspector. Whereupon Mr. John Hall gave an answer, which shows that the managers of the Miners' Association are eminently qualified to enter into political alliance with Lord George Bentinck. "If a period of trade arrives," he said, "when trade is bad, and the demand for coal declines, we propose to keep up the colliers' wages by regulating the supply, and keeping coals dear—so that they will still earn say 3*s.* 6*d.* per day for a less quantity of coal." If this were practicable as a permanent arrangement—that is to say, if with a diminished demand for coal those who still want it could be forced to pay such a price for the diminished quantity as would enable all the men now employed to receive the same, or nearly the same, wages that they do at present, it must be confessed that the Miners' Association would have made a valuable discovery. But, unfortunately, we have had too much experience of such attempts to have any doubt of the fate which must attend the miners' regulation, whenever it comes to be really tested by a falling off of demand. In trying to make their remaining customers pay for those whom they lose, it will be found that the buyers drop off much more rapidly than the sellers can raise prices, and that the ultimate result of the miners' legislation, supposing it possible to adhere to it, would be the total stoppage and ruin of the English coal trade.

For the present, a concurrence of circumstances puts it into the power of the miners to raise prices artificially to a considerable extent. The production of coal and iron is made more expensive than it would be with a free employment of labourers. The men, according to the witness Hall, are about nine hours down the pit. Another witness, connected with the association, states that the present day's work can be done in eight hours, and the employers assert that it could be done in much less time. For the present, therefore, the miners are getting large wages for comparatively slight work, and to men who are too ignorant to anticipate the future, or to trace the consequences of their own acts, this may be a matter of unmixed satisfaction. The restrictions, however, which produce this temporary advantage are working as all such restrictions are certain to work. The production of coal and iron on the continent is rapidly increasing. In France, Belgium, Germany, and America every year sees new mines opened and new furnaces built. We are not merely losing our markets in those countries for many articles, but find ourselves driven by them out of neutral markets, and are even undersold at the doors of our own workshops. Knives, scissors, gimlets, screws, and other articles of hardware, in which for a long time England was able to outstrip all competitors, have been, and are, imported from Belgium into Birmingham, and sold there, both to home and foreign buyers, at a much cheaper rate than they can now be produced in the surrounding district. Mr. Tremenheere supplies us with the following instructive piece of evidence from Mr. Barker, of the Chillington Iron-Works, Wolverhampton, as representing the general opinion in that neighbourhood:—

"The colliers are working only eight or nine hours a day, and only five days in the week—they are earning 4*s.* 4½*d.* per day—they might work 10 hours a day without the smallest difficulty to themselves. In consequence of the restriction they put upon their labour, the masters are obliged to keep more pits open, and are subject in various ways to additional charges in getting their coal and ironstone, and a much larger capital is required. If they would work 12 hours more per week, we should be able to raise our required quantity with fewer pits; we want, say, 3000 tons per week, which we now get out of 20 pits. If they would work 12 hours a week more, or one-seventh, we should be able to dispense with three pits; the interest of all the capital required to carry on those three pits would be saved, and the rest would be worked more economically.

"The staple trade of Wolverhampton is suffering, in a great degree, from the unduly high price of coal and iron forced upon us by this restriction of labour among the colliers and miners. Coals are now 13*s.* a ton, which a few years ago were 6*s.* 6*d.*; bar-iron is now 10*l.* a ton—in 1842 it was 8*l.* 5*s.* The staple trade of Wolverhampton, Bilston, Willenhall, Darlaston, Wednesbury, Sedgeley, &c., consists of the making of hinges, bolts, nails, locks, screws, &c.; articles, *the main part of the cost of which is that of the iron, and the coal for working it up*. The high price of coal and iron has driven a great deal of this trade to Prussia and Belgium, which countries are now successfully competing with our own producers of these articles, in neutral markets. America now makes nearly all her own rails—this has occurred within the last four years only. The production of iron in Germany, Belgium, France, and America, has greatly increased. Staffordshire being so far from the sea, has that additional circumstance against her, in competing with her rival producers at home or abroad."

The inspector, who quotes this evidence, observes, that "the demand for iron for railways is, doubtless, a main cause of the high prices of iron and coal," and this is, of course, unquestionable; but after making the most ample allowance for the influence of the great railway demand, there is just as little room for doubt that a large portion of the effect is produced by the miners' combination. The railway demand for iron exists in other countries as well as in England; but the artificial restrictions on the supply of coal are peculiar to this country, and they very seriously limit its power of meeting foreign competitors. Some facts stated by Mr. S. Thornton, manufacturer and merchant at Birmingham, as to the comparative prices of English and foreign hardware, are really startling. He says—"There are half a dozen large screw manufacturers in and about Birmingham. My inquiries among them lead me to conclude that three or four years ago nearly one half of the quantity produced went to the American market; at present, not more than 5 per cent. finds its way there. A neighbour of mine, an extensive screw maker, informs me that his returns alone to that market were of the value of 20,000*l.* per annum—they are now reduced to not more than 500*l.* He stated, that if the prices of coal and iron were moderately low, he might still be able to compete with America, notwithstanding their duty of 30 per cent. The following are the prices at which some articles of common use, and of qualities about equal to those of English manufacture, of which the prices are also annexed, are imported from Germany, and sold at Birmingham:—

		£.	d.	
No. 695.	Knife manufactured at Solingen, Rhenish Prussia	5	3	per dozen.
691.	Ditto, manufactured at Sheffield	9	3	"
1516.	Scissors manufactured in Prussia	7	1	"
3335.	Ditto, manufactured in Sheffield, inferior to 1516	12	0	"
1.	Common gimlets, manufactured at Hamburg, price at Birmingham, including duty and carriage	5	6	per gross.
2.	Ditto, manufactured at Birmingham	7	6	"

"An ornamental cast in iron of the statue of Guttenbergh, made at Hamburg—price 2*s.* 6*d.*—would cost to make at Birmingham 25*s.*"

It is under these circumstances, while we are losing an important branch of manufacture, upon the prosperity of which depends a considerable portion of the demand for iron and coal, that the producers of those materials think it safe to persist in a course which artificially enhances the price of both articles, and thereby destroys the business of some of their own best customers. The great demand for iron for railways may prevent the full evil of these proceedings from being brought home to the miners so soon as they otherwise would; but the reaction from excessive demand will certainly come, and will be all the more severely felt from the delay. Meanwhile, it is impossible not to be convinced that the miners do not understand or anticipate the natural consequences of what they are doing. Such knowledge and habits of reflection as it is not unreasonable to expect from the diffusion of education, would, we believe, be an effectual safeguard against the errors into which they have fallen. Education, it is true, is a slow remedy, but it is the only sure one. In this case, as in many others, we must endure very serious evils, from having neglected that remedy during so long a time in which it might have been in beneficial operation.

MINING POPULATION OF AYRSHIRE.—Mr. S. Tremenheere, the commissioner appointed to inquire into the state of the mining districts, gives the following details in reference to the mining population in Ayrshire:—The county of Ayr is about to become an important seat of the iron manufacture. Large iron and coal works are springing up in and near the parish of Dairy, a little to the north of Kilmarnock; others near that town; and the works of Mr. Wilson, at Dupar, about 20 miles from it towards the south. It will require all the attention and foresight of the proprietors to prevent the growth and increase, in the parish of Dairy, of those evils which have arisen so manifestly in the Coatbridge and Airdrie district of Lanarkshire, from the permitted operation of causes which inevitably undermine the morals of the people. The minister of that parish, the Rev. Robert Stevenson, informed me, that the population had been increasing at the rate of about 1000 a year, for the last few years, until it now amounts to 8000. Until the iron-works commenced, about four years ago, its population were engaged in rural industry. The arrangement of several new masses of houses is in rows close behind each other, without proper drainage. The disorderly tendencies of a population rapidly collected from various quarters were unchecked by the presence of any adequate police. Considerable efforts were being made to establish schools. Some had been set on foot, but more were still needed, and were apparently likely to be effected by the cordial exertions of all parties. The companies chiefly employing the people in this parish are the Ayrshire Malleable Iron Company, the Glengarnock Company (Messrs. Merry and Cunningham), and the Eglinton Iron Company (Messrs. Baird). The complaints were general as to the effect of the combination of the men, in unduly raising the rate of wages. Mr. S. Jackson, manager of the Glengarnock Works, stated that coal had been raised from 3*s.* 6*d.* to 8*s.* 6*d.* per ton, which was one-third too dear. Mr. Baird (late M.P. for Airdrie), whose works are the most extensive in Scotland, expressed a very strong opinion as to the permanent injury which the combination was inflicting on the iron trade in Ayrshire, as elsewhere, by stimulating foreign competition.

An engineer of Glasgow asserts, that he has discovered a mode of propelling vessels on rivers and canals, at the same speed as locomotive engines on railways, and at half the cost.

A patent has lately been taken out for "making paper for the building of houses, bridges, ships, boats, and all sorts of wheel carriages, sedan chairs, chairs, tables, and bookcases, either entirely of paper, or of wood and iron covered with paper."

THE SILVER AND GOLD MINES OF THE NEW WORLD.

SECOND PART.—ON THE FUTURE PROSPECTS OF THE MINES OF AMERICA, COMPARED WITH THOSE OF EUROPE.—NO. V.

The Frieberg process being thus set aside, there remain the systems founded on the employment of electro-chemical power, which are able to break the most intimate combinations of bodies, in order to extract any one which helps to compose them. The thing to be done is, to obtain in this way silver furnaces. Many persons occupy themselves in trying to discover it. M. Becquerel has attached his name to such experiments. At Real del Monte, in Mexico, also, Mr. M'Kenzie, an old Scotch practitioner, still stout in body and young in mind, whom I found managing the establishment of Real del Monte, does not confine himself to inquiring with anxiety after the labours of M. Becquerel, and to examining all the publications and travellers from Europe to obtain information on the subject; but he has himself a laboratory—a mysterious place, in which he makes experiments with fervour—which reminded me of the alchymists of old, bent for entire years over their furnaces. Till now, however, the electric sybil has not revealed to him her mysteries. There is, nevertheless, reason to believe that a process of extraction by the employment of electro-chemical power will be made—it is even made already. The labours of M. Becquerel have been brought to a conclusion. He has been able, within the last few years, to give an industrial character to the electro-chemical method. M. Duport has been able to make trials of it on 4000 kilogrammes of the principal Mexican ores, which he had caused to be brought to Paris, and had tried it on others in Mexico. "The result of my experiments," says he, "is favourable to the electro-chemical process for *a great number of ores*, not only in the somewhat improbable hypotheses of an absolute failure of mercury, but even with the present high price of quicksilver." But still this process has not yet been adopted by any establishment, nor does it appear likely to be. M. Duport explains this by several reasons, drawn from the social, political, and economical circumstances in which Mexico is placed. And thus it is that the peculiar position of this country constantly renders difficult or impossible what seems perfectly easy, when things are judged after the manner in which they would occur in any one of the advanced countries of Europe, or in the United States.

In the country in which the people are complete strangers to the mechanical arts, the extreme simplicity of the process, and of the instruments which serve in the Mexican amalgamation, are a great obstacle to all innovation; for where can the agents be found capable of conducting a more complex operation, or of handling more delicate or more learned instruments? In the second place, a large capital would be indispensable, because every construction for mining operations is very dear in Mexico. The establishment of Regla, as we have said, cost 10,000,000 fr. To naturalise a new process, the inventors, who in general do not possess capital, would have to interest capitalists; but such people only consent to risk large sums when they make large profits, and for some years past Mexican miners have had indifferent success. Let us suppose, however, that an inventor succeeds in obtaining a certain capital, and he would not then be at the end of his trouble, for he would have to procure a sufficient quantity of ore of recognised quality. But, unless he has a mine of his own, that is impossible; the manner in which ore is purchased being entirely contingent. It is thus that at every moment one encounters, like a wall, the usages, or the manners, the routine, the prejudices, the indolence, all, in short, which characterises an incomplete civilisation, where man has only imperfectly established his empire on the soil, on nature, on himself. And, then, what motive could an inventor have for going to Mexico to recommend the adoption of a new process? What would he obtain from it? The protection accorded to patents of inventions in a country in which the administration of justice is, at least, very slow, when it has not worse faults, is so doubtful, that no confidence can be placed in it. Lastly, the electro-chemical process has, in the present state of things, a real inconvenience—it exacts a very large quantity of salt. It would, it is true, be possible, by an additional operation, to withdraw the greater part of the salt from the mud, in which it remains, without losing its quality; but the machines necessary for that regeneration would form a considerable, expensive, and embarrassing *materiel*. In this respect, then, it is rather by the lowering of the price of salt—or, in other words, by the improvements of the roads of conveyance, which would form quite a revolution in Mexico—that the electro-chemical process, which might entirely dispense with the employment of mercury, in the cold extraction of silver, would become *advantageously* applicable to *a great number* of ores—this is the expression of M. Duport, who does not say to *all*.

The electro-chemical treatment, then, is almost to be despaired of in the present state of things. M. Duport himself appears to know another process, which, he says, would be sure and prompt—which would require mercury, but would only consume the fifth or the sixth of what is at present devoured, and which would withdraw the silver more completely than is done by the present method; but M. Duport, who is a man of resolution, as much as of knowledge and experience, has retreated before the force of the inertness, which, in those countries, enchains the most intrepid activity. However, it is proved that, if by a fairy's wand, the state of the people's minds, and the social and political condition of the country could be changed, the consumption of mercury might be diminished by five-sixths, perhaps by nine-tenths. At the present price of that metal, the cost of production of a kilogramme of silver would be reduced by about 100 *grammes* of silver, or one-tenth.

At this moment, in the establishment of the mines of Guadalupe-y-Calvo, a process is employed, which has, it is said, the merit of reducing by one-half the consumption of mercury, and of accelerating the operation. It was discovered by two agents of the company—M. Lukner, a German engineer, and Mr. Mackintosh, an English engineer—and consists in substituting an amalgam of copper for mercury in the work of the *patio*. M. Duport describes in detail the effects of this new ingredient. I know not if it would be possible to apply it everywhere.

I have written at some length on mercury, because it is a subject of the greatest anxiety to the Mexican miner. Among the other expenses, there are some, with respect to which still greater economy may be hoped for, than in the item of mercury. Thus the trituration of the ore constantly represents a disbursement of 171 *grammes*, and the working of the triturated ore, consisting principally in the treading of mules or men, is equivalent to 72. The labour of the Mexican miner is thereby employed to the extent of 243 *grammes*, about the quarter of the kilogramme of silver produced. That is very dear—although, to obtain a kilogramme of silver, there must be pulverised and trodden, at least, 500 kilogrammes of ore. But it is owing to the fact, that the motive power, instead of being borrowed from the elements, from water-falls, from currents, or from steam, is most frequently obtained from animals, or even from men. In a country in which notions of mechanical matters are common, these costly motive powers would be soon replaced, in a great degree, by others more economical.

Man cannot multiply water-falls at will—he has only those which Nature gives him; but he has the power of better utilising those which he possesses. Nothing would be easier than to have hydraulic wheels better disposed than those which one sees, though very rarely, at the mines of Mexico and Peru. In more than one place, in those regions where rain water is three times more abundant than it is at Paris, it would be possible to imprison it in deep vales, where the melted snows of the eternal glaciers, at the top of the mountains, might also be directed; and thus vast reservoirs of motive power might be created. This is what was done at Potosi at the end of the sixteenth century, and the establishments of Potosi still continue to be served in that way. Windmills have been employed in Mexico by M. Doy, a French engineer. They might, as stated by M. Duport, be generally and continuously employed in all the mines for the poorest portion of the ore. Steam has never yet been employed in the trituration of the ore, and it cannot be until the forests shall be regenerated; but the regeneration of the forests would not be difficult, if seriously desired in those countries in which the population is scanty, and in which there are no great interests that oppose it. The strength of vegetation being very great in the equinoctial regions, the reproduction of fuel would be rapid on all the lands which have not an excessive elevation. In many parts of the mountains of Mexico there are somewhat extensive basins, formerly lakes, in which turf has sometimes been found. By seeking, new deposits of it would no doubt be discovered. In some parts of the New World, not far from the mines, beds of coal have been discovered—at Peru, for example, near the incomparable mines of Pasco, which appear the richest in the universe. In Mexico there is nothing of the kind; but it is not proved that, if the country were traversed by good roads, and the interior production organised in such a manner as to offer returns to trade (the country, for example, might export flour and sugar, perhaps even cotton, with good means of transport), the coal of New Scotland, and particularly that which exists near Tampico, could not be delivered to the Mexican mines at prices not too high. At 5 fr. the 100 kilogrammes, which in Europe is considered an exorbitant price, the producers of silver in the New World would consider themselves happy to procure coal. Lastly, in most cases, the progress of cultivation, and the establishment of good roads, would produce great economy in the cost of feeding beasts of toil, supposing that the employment of mules were to be maintained for the trituration of ores, and the treading of the *tortas*.

As to the advantage of using coal, it may be mentioned that a very good steam-engine burns 3 kilogrammes of coal per horse per hour; and that a steam-horse has double the strength of a horse in flesh and bones, and is, consequently, equal to ten men. Men and beasts, labouring eight hours a day, 24 kilogrammes of coal, which, at 5 fr. the 100 kilogrammes, would cost 1 fr. 20 c., would do the labour of two animals, whose feeding costs 2 fr. at least, and often much more, and that of 10 men, who cost, on an average of 3 fr. per head, 30 fr. The advantage would be much greater with large water-falls, or wind-mills.

One example, among a thousand, will show the importance of the savings which might be effected in the production of silver by better mechanical arrangements. Let us take one part of the metallurgical operation—the treading of the *tortas*. A French traveller visiting Potosi, some years ago, advised the miners to replace the Indians, who were paid at the rate of 3 fr. 40 c. per day to tread out the ore, not only by mules, as in Mexico and in Peru, properly so called, but by a machine similar to that which in Europe serves to pound mortar. The idea pleased one of the miners, who established the machine at an expense of about 64*l*. The results were excellent. With a single mule to turn the wheel, as much work was done as would have been performed by 20 Indians, who would have cost 86 fr.—the mule and its conductor costing only 5½ fr. As a specimen of the manners of the people, showing how little enlightened these people are, and to what extent they are slaves of routine, I ought to add, that the miner who made the experiment, which succeeded so well, was the only one to profit by it. He was a Spaniard; the Creoles, his neighbours, refused to imitate him. Probably, at the moment at which I write these lines, they have not yet yielded to evidence; and yet for 12 years this improvement, so simple, so easy, has been under their eyes.

[*To be continued in next week's Mining Journal.*]

SOUTH DEVON RAILWAY—THE ATMOSPHERIC SYSTEM.

During the last few days, we have had the pleasure of inspecting the condition of the atmospheric works upon the South Devon line, between Exeter and Teignmouth, and witnessing the working of the system on that portion of the railway. The length of the line at present in daily operation with atmospheric traction is 15 miles, upon which are the Star Cross station—8¾ miles from Exeter, Dawlish—3¾ miles beyond, and then Teignmouth, which is three miles distant. The local traffic to and from these watering-places, at each of which all the passenger trains stop, is very heavy. The passenger (locomotive) trains between Exeter and Totnes are seven each way, daily; in addition to these, there are four probationary, or experimental atmospheric passenger trains, and one goods train, running daily; and we understand that, in the course of next week, the four first trains will take passengers between Exeter and Teignmouth in common with the seven passenger trains now at work.

The diameter of the tube laid down between Exeter and Teignmouth, is the same as that which was worked upon the Croydon Railway—viz.: 15 in. The 8¾ miles portion of the South Devon line is, we believe, almost a dead level. The managers of the atmospheric are, therefore, enabled to work very considerable loads between these two points, and at a rate, too, that was, two or three years since, considered to be unattainable with a 15-in. tube.

We learn, from the record of the rates of speed attained with the atmospheric apparatus, that on the 8th inst., an 80-tons train was taken between the 196 and 200 mile post in 278 seconds, or at an average speed of nearly 52 miles per hour.

Among the improvements which the promoters of the atmospheric system have effected beyond what we saw on the Croydon line, a prominent one is to be found in the station arrangements. The passage of the piston is now made throughout the line, without any interference with the rails, and minus any of the peculiar-formed switches that were adopted on the Croydon line. By a very simple contrivance the piston is lifted over the ordinary crossing rails with ease and certainty at the highest velocities; and the starting of the trains from a state of rest at the stations, even before the piston has reached the exhausting tube, is most ingeniously contrived. The latter operation is effected by a supplemental tube, fixed completely outside of the rails, and the connection between this tube and the carriage ceases immediately after the train has left the station, and the train piston has entered the propelling tube. Thus, even ordinary stations, and station arrangements, in every respect suitable and convenient for locomotive purposes, are made available for working trains by atmospheric power. It is stated, that the whole of the traffic between Exeter and Newton will be worked by atmospheric power in the course of a month.

Every possible assistance has been given on the line to the development of the atmospheric system. Mr. Brunel has, we know, been indefatigable and unceasing in his exertions to render it applicable to railway traction; and we believe that, if it be possible to work a single and thorough atmospheric line with regularity and practical efficiency, the eminent and enterprising engineer whose name we have mentioned is just the man to accomplish such a task.—*Morning Herald*, this morning.

OPENING OF THE CALEDONIAN RAILWAY.—The 40 miles of railway between Carlisle and Beattock, which form the first portion of the Caledonian, were inspected on Saturday last, by Captain Symmonds, and declared to be ready for public use. Thursday having been fixed upon for the opening by the directors, a deputation from the board, accompanied by Captain Coddington, the newly appointed secretary, and a party of friends left Beattock about 10 o'clock, and arrived in Carlisle at mid-day; halting at the General Railway station, a handsome structure, built from the design of Mr. Tite, and intended to accommodate the Caledonian, the Lancaster and Carlisle, the Newcastle and Carlisle, and the Maryport and Carlisle companies. Three additional carriages having been attached to the train, making the number nine, the mayor and corporation of Carlisle, and deputations from the Lancaster and Carlisle and Maryport and Carlisle Railways entered them, and the train started, on its return to Beatock, at twelve o'clock. Owing to the disagreeable state of the weather the "progress" did not present any peculiarities requiring especial notice, We may mention, however, that the highly-finished state of the works, the ease of the carriages, and the steadiness and rapidity with which the train, a very heavy one, was drawn along, were subjects of universal remark. The entire journey was completed in less than two hours. A sumptuous cold collation set out in the large room of the station. J. J. Hope Johnstone, Esq., of Rae Hill, chairman of the company, presided, and Capt. Coddington occupied the vice-chair.—Various toasts and sentiments, befitting the occasion, were proposed, after which the meeting separated.

MIDLAND GREAT WESTERN RAILWAY OF IRELAND.—The Postmaster-General has given instructions to the directors of the Midland Great Western Railway Company of Ireland, for the conveyance of the Galway and Sligo mails, on and after the 8th proximo.

On Thursday, the 2d inst., a locomotive ran, for the first time, on the railroad from Creil to St. Quentin, in the section of Compeigne. Eight waggons, loaded with sand, were drawn to some distance beyond Venetti. The works are proceeding with unusual rapidity.

NEW LIFE BOAT.—The new life boat, referred to in the *Mining Journal* of the 4th inst., was tried under canvas on Monday, and as to her buoyancy and safety at Southampton on Friday, in the presence of Capt. Sir John Sinclair, Bart., R.N.; Capt. Appleby, R.N.; Capt. Lowry, R.N.; and several naval officers; Capt. Mangles (director), and Capt. Barton, R.N., superintendent of the West India Mail Company; Mr. Liggins (director), and Mr. Saintsbury (secretary) of the Dock Company; Capt. Sparkes (superintendent), and Mr. Lamb (engineer) of the Peninsular and Oriental Company. The result gave general satisfaction, demonstrating the fact, that it is impossible to sink or capsize her. The arrangement and form of the water compartments are novel and complete, being built in with the boat in several sections—so that, if one be stove in, the others are uninjured; towards the top they are rounded off, by which plan the great bulk of the water (supposing a sea filled her) is tipped out as the boat rolls; and as, full of men and water she cannot be sunk, it enables the boat, by the very motion of the sea, to discharge the water without baling—thus all the men have to do is to hold on or be lashed in a storm. Each end is alike, fitted to be steered with an oar if the rudder is lost, and forming air-tight compartments; one is suited for water, and the other for food; a man hole is fitted on deck to give safe access, and will contain a month's provision for 50 men, which number she will very comfortably stow. Yesterday, from 90 to 100 men were in her, using their utmost to capsize her without effect. Mr. Andrew Lamb, of the Peninsular and Oriental Steam Navigation Company, is the inventor, and was present directing the operations.

LINING OF LEAD CISTERNS WITH ROMAN CEMENT.—It is generally believed that Roman cement will not adhere to lead; but I am informed by a gentleman that he had a leaden tank, covered with a thin coating of good cement, about three years since, which is perfect to this day. If this simple plan were to be generally adopted, no risk, as regards the tanks, would be incurred: an occasional inspection, in order to see that the cement had not chipped off, is all that would be required.—Correspondent of *The Builder*.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—Accompanying you have our settling list for September month. We have been obliged to remove the sumpmen from the flat-rod to the shaft sinking on the slob; men being rather scarce, and the importance of quickly getting down this shaft, is greater than sinking flat-rod shaft for the present; we shall not require a metal shaft as I anticipated, unless we discover some new feature which we have not yet seen; this will enable us to accomplish it for upwards of 100*l*. less than the estimated cost. The main lode, in the 18 fm. level end west, is large, but producing about the same quantity of ore as last reported, worth about 10*l*. per fm.; the winze, sinking behind this end, on a dropping branch from the lode, which has continued its perpendicular course for 5 fms., is still worth about 8*l*. to 10*l*. per fm.; from the regularity and general appearance of this branch, although not over 3 or 4 in. wide at present, we think it will lead to something good; in the rise, in the back of this level, the lode is worth about 12*l*. to 14*l*. per fm. The 12 fm. level end has been driven about 4 ft. north, and the lode discovered west of slide; it is worth about 8*l*. per fm.; the stopes on middle lode, in bottom of 12 fm. level, are looking very much the same, worth about 14*l*. per fm. By holing the shaft in the slob to the 18 fm. level we shall considerably increase our raisings.—Sept. 4.

BEDFORD UNITED.—At Wheal Marquis, the lode in the bottom level, east of the sump winze, is still worth 50*l*. per fm.; in this level west the south lode is 2 ft. wide, and worth 40*l*. per fm.—the north lode is 2 ft. wide, and worth 12*l*. per fm. The lode in the 80 fm. level east is 3 ft. wide, good work; in the western winze, in this level, there is no alteration; the pitch, in the back of this level, is still looking well. The lode in the 70 fm. level east is 2 ft. wide, and worth about 10*l*. per fm. There is no alteration in the 58 fm. level east. At Liscombe, the lode in the adit level east is 2 ft. wide, producing stones of ore and kindly; in the rise, in this level, the lode is 2 ft. wide, and without alteration. The lode in the 25 fm. level, east of the south engine-shaft, is 3 ft. wide, producing good stones of ore—a very promising lode. In the adit level east the lode is 18 in. wide, composed of spar, mundic, and ore.—Sept. 7.

CALLINGTON.—Kelly Bray engine-shaft is sunk nearly 10 fms. below the 25 fm. level, or what may more properly be termed the adit level. We shall commence cutting plat in a day or two; in sinking below the 25, on the course of the lode, which is rather hard, we find it 4 ft. wide, very promising, with a little ore; we look forward to an improvement when the droppers, seen in the cross-cut, fall into the lode; and we expect this will take place within 5 fms. In the 70 fm. level we have a small cross-course—the lode is 4 ft. wide, rather disordered; the orey part is 2 ft. big, and is very good work. In the 100 fm. level north the ground is very soft, with a porphyritic appearance—the lode is small, producing good work; the back will work at a low tribute; in the same level south the ground is rather hard—the back will set at a moderate tribute. In the 90 fm. level north the lode is small, producing silver-lead ores; in the south level we are opening good tribute ground. In the 70 fm. level north the ground is soft, and the lode is producing silver-lead ores. In the south mine, in the 125 south, we are opening ground that will work at a moderate tribute; in rising in the back of this level the ground is hard. In the 112 south no lode has been taken down; in rising in the back of the north end the lode is small, producing silver-lead ore; no lode taken down in either of the levels above.—Sept. 6.

CASCADE.—I have much pleasure in apprising you that, in costeaning south from the river Lyd, towards Brentor-road, we have discovered three lodes and two branches. The first lode is 45 fms. south from the river; it dips north, and is 2 ft. wide, principally quartz; there are two branches, one 7 fms., and the other 12 fms., distant from this lode—and, according to their present inclination, they will drop into the lode at the intended adit, or cross-cut—I consider these branches a very favourable indication. The second lode is in the meadow, at the head of the coppice, and is 6 ft. wide, composed of spar and killas of a soft texture, and its direction would indicate it to be a continuation of the lode found productive in the adjoining mine—Wheal Susan. The third, or south, lode is about 55 fms. north of the Brentor-road, and is 2 ft. wide, chiefly spar. I am gratified to find mundic in all the lodes, and the spar precisely similar to that from Wheal Susan, as well as that from the rich mine of Wheal Friendship, in the same district. These discoveries have put us in a position to determine respecting the new adit, or cross-cut, which we shall commence immediately at the level of the river; and, by extending it south about 80 fms., it would, after cutting through the first and second lodes, intersect the south lode about 50 fms. under the surface—thus enabling us to work on all three lodes at a considerable depth, without the aid of machinery. It is intended to costean north from the river, where three or four other lodes are expected to be met with, which can also be worked by an adit.—Sept. 4.

COATLITHE HILLS.—The level, east from A shaft, has been driven about 3 ft. during this week; thevein in the end is still very much disordered—and, by the appearance of the ground, I expect we are near to an intersection with some other vein; and I have every reason to believe that, after getting through this disordered part, we shall have the vein equally, if not more, productive than it has been yet. The horse level has been driven about a fathom during this week.—Sept. 4.

CUBERT SILVER-LEAD.—The engine-shaft is still passing through the same nature of ground as it has been for some time past. In the 35 fm. level, driving east, the lode is 18 in. wide, composed of a hardish spar, a great deal of mundic, and good stones of lead; in the western end, in this level, the lode is from 2 to 3 ft. wide, and all saving work, but, at present, of coarse quality—a kindly level. In the 25 fm. level, going east, the lode is 1 ft. wide, but unproductive; westward, in this level, there is a very promising lode, 18 in. wide, worth a ton of ore in a fm. The 15 fm. level cross-cut is going on in favourable ground towards the new shaft. No alteration has been made in the tribute department since setting day.—Sept. 3.

DEAN PRIOR AND BUCKFASTLEIGH.—The lode in the deep adit and 10 fm. levels is without alteration since my last report. In the bottom, or 20 fm., level the lode still maintains its very promising character, and improving going to hill, and clearly showing the lode to be strong in going down—therefore the prospects of the mine hold out every encouragement of its becoming one of the best speculations in the country, when the workings shall have been further extended. The ground in the wheel-pit is harder than what I anticipated; we have about 4½ ft. more to stope to put over the present bottom; the lobby is nearly driven up to the pit, or within 2½ fms., which will be soon completed: the masons are building the wall, and turning arch over the same; I have increased the number of men in excavating the wheel-pits, in order to carry the work into effect with all possible speed. The castings for the new water-wheel are all on the mine, ready to be connected and fixed in its place as soon as the ground work is completed, and the rings of the wheel, together with the arms, bucketting, and backing, &c., will be all ready in time for fixing—therefore, we shall lose no time as to carrying out the work in all its branches, &c.—Sept. 6.

DEVON AND COURTENAY CONSOLS.—In the end, driving south on the cross-course, in the 30 fm. level, we have not yet discovered the lode; the cross-course continues very large, and, from its appearance, the lode is not far distant; in the end, driving east, in this same level, we have got through the slide, and find the lode is 2 ft. wide, composed of peach and fine mundic; in the deep adit level, on the south lode, the lode is 20 in. wide, composed of spar and some spots of copper ore; and although the lode is at present poor, I consider the change has indications of improvement; in the shallow adit level, on the north lode, we have holed to the shaft, sunk on the course of the lode, and are now clearing some stuff that escaped from behind some timber before the water was drained; this I expect will be done in a day or two; at the engine-shaft the men are progressing with the sinking as fast as possible—the ground being rather hard, composed of killas, mixed with floors of spar.—Sept. 7.

DYFNGWM.—The following report, dated Sept. 1, has been forwarded by Mr. Reynolds, the manager, to the finance committee:—"I beg to hand you the cost for the past month, together with my report on the mine. In the stopes, west of the engine-shaft, in the 22 fm. level, we have cut 1 fm 5 ft. of ground, worth 16*l*. per fm. for lead; the lead in this stope is more solid, and less jack, than it was before; we might, with a small additional expense, open about 500 fms. of orey ground to the west of this stope, from which there is scarcely a doubt but we should raise large quantities of ore, which would well pay the adventurers for their trouble and expense. In the stopes east, in the 22 fm. level, we have cut 3 fathoms of ground, which is worth 6*l*. per fm. for lead; in the eastern end, in the 22 fathom level, we had driven, previous to the last month, on the south part of the lode; in the last month we have taken down the north part for 3 fms. 3 ft. in length; the lode is 9 ft. wide, and worth 10*l*. per fm. for lead; the lead is much better below the level than it is above, proving in this, as well as every other part of the mine, that the deeper we sink the better the lead is; this end is now within about 12 fathoms to the winze sunk in the 16 fathom level, which, when driven, will open nearly 100 fathoms of good orey ground. We are getting on as fast as possible with the dressing. I fully expect, if all is well, by the end of the present month, we shall have nearly 20 tons ready to ship, and also about 20 tons unwashed. In the present month, I have set four bargains in the 22 fm. level, and two in the 16 fm. level—all of them will be raising lead." The following is the monthly account, ending Aug. 31:—By 1 fm. 5 ft., in 22 fm. west, worth 16*l*. per fm., 30*l*.; 3 fms., in 22 fm. east, worth 6*l*. per fm., 18*l*.; 3 fms. 3 ft., in 22 fm. east, worth 10*l*. per fm., 35*l*.—83*l*. To taking down lode, in 22 fm. level, 3½ fms., 10*l*. 14s. 6d.; stoping, in 22 fm. east, 3 fms., 13*l*. 10s.; raising and stoping, in 22 fm. west, 1 fm. 5 ft., 7*l*. 18s. 8d.: leaving a balance of 50*l*. 16s. 10d.—[A more favourable report could not be desired; confirming, as it does, all we have previously said of the concern.]

EAST CROWNDALE.—The ground in our engine-shaft still continues hard and troublesome to sink in, and our operations have been delayed on account of the door-piece of the sinking-lift having bursted; this is again set right, and water in fork. I am glad to state, that the lode in the adit level, at Rix Hill, still continues to look well; it is about 5 ft. wide, all good saving work, com-

pose of peach, capel, a little killas, and tin; this lode appears to underlie a little to the south, and has two smooth walls, and has every appearance of a lasting course of tin. Our engine and pitwork are in good order.—Sept. 4.

EAST TAMAR CONSOLS.—The lode in Harrison's shaft is 2 feet wide, fluor-spar and silver-lead ore, saving work. The lode in the 54 north is 20 in. wide, coarse work; the lode in the 54 south is 2 ft. wide, fluor-spar and ore—a very kindly lode. The lode in the 46 north is 18 in. wide, work of a good quality; the lode in the 46 south is 20 in. wide, capel, spar, and ore, work of a coarse quality. The lode in the 38 south is 18 in. wide, capel, spar, and ore, saving work. At Charlotte's, the lode in this part of the mine has just the same appearance as last reported on.—Sept. 7.

GREAT MICHELL CONSOLS.—In the 35 fm. level, east of the engine-shaft, the lode is composed of mundic, spar, and good stones of ore; in this level, west of ditto, the lode is producing stones of ore; in the 35 fm. level, driving west of the western winze, the lode is producing good stones of ore, intermixed with mundic and fluor-spar.—Sept. 7.

GREAT WHEAL MARTHA.—The lode in the 40 fm. level east is still 5 ft. big, 1 ft. being copper and mundic, and the 4 ft. contains spar and mundic, intermixed with copper. We have opened on the north lode about 100 fms. to the west of where we first discovered it near the lane, which is 4 ft. big, composed of gossan and spar, spotted with mundic, and of a kindly appearance.

HOLMBUSH.—The ground in the diagonal shaft is still favourable, and in the deepest point is sunk 10 fms. below the 120 fm. level; we have intersected another small branch of spar, spotted with rich copper ore, underlying south. The lode in the 120 fm. level, west of the great cross-course, is 14 in. wide, composed of spar, mundic, killas, and spots of ore. The lode in the 110 fm. level south is 16 in. wide, composed of soft spar and stones of lead; we have increased the number of men from 4 to 6, to push on this level to get under the lead ground in the bottom of the upper level, and, to expedite the business, have given them an extent for the month, at 3*l.* 10*s.* per fm. The lode in the rise, above this level, is 20 in. wide, composed of spar, flookan, and spots of lead—we expect to communicate this rise to the 100 fm. level in the course of the month. The lode in the 100 fm. level south is 2 ft. wide, composed of spar, with a branch of lead on each wall of the lode, producing one ton of lead per fm.; leaving similar ground in the back and bottom of the level, two tribute pitches in the back of this level are now being wrought at 4*s.* and 6*s.* in the 1*l.* on the value of the lead. The lode in the 90 fm. level south is 18 in. wide, composed of soft spar and flookan, with a small branch of lead, for the height of the level much kindlier than we have seen it before. Within the last few days, a hard channel of ground, 3 ft. wide, having passed through the lode, and is now apparently separated from it, to the south of which there is a decided improvement, both in the lode and strata, as was likewise proved in the pitch below this level.—Sept. 7.

ILAM.—The lode in the 67 fm. level, east of Robins's shaft, is large, with good stones of copper ore. The lode in Robins's shaft is the same as when I last wrote. We have driven the cross-cut 4½ ft. of ground this week, and have intersected in the end a branch 7 in. wide, running across the end—this is the same branch as we cut 2 fms. east of the shaft. The end driving on a lode, north of Robins's lode, to cut the perpendicular lode, is about 10 in. big, with a little copper.—Sept. 4.

KIRKCUDBRIGHTSHIRE.—The lode in the bottom of the engine-shaft, sinking under the 40 fm. level, is small—say 18 in. wide—and poor, ground not so good for sinking as it has been. The lode in the end, driving west at the 40 fm. level, is divided, the main part is about 3½ ft. wide, producing about ¾ of a ton per fm.; the other part taking north—viz.: to the right hand—is upwards of 6 ft. wide, and producing about 1 ton per fm., but cannot find its footwall. The lode in the 30 end west is still large, with some stones of lead, and ground much easier. The lode in the 20 end west has not improved in width, but more so for lead this day or two—should say ¾ of a ton per fm.; the backs here, and other stopes, continue as last reported. If a vessel can be obtained, we expect to ship some 30 tons of lead in the course of the coming week.—Sept. 4.——The following is the report of a well-informed and experienced Cornish mine agent, who has inspected the property by the desire of some of the most influential proprietors:—"Agreeable with your request, I have carefully inspected the Cairnsmore Mines, and beg to hand you the following as the result of my observations:—The engine-shaft is sunk from surface, on course of the lode, 5 fathoms below the 40 fm. level, in the bottom of which the lode is 2 ft. 6 in. wide, producing 5 cwts. lead ore per fm.; the lode in western end of shaft is much better than in the east end; there are two lifts fixed for pumping the water, one 6 in., and the other 4½ in. diameter, working four strokes per minute. From the singular small quantity of water in the mine at present, I should think the present wheel would pump all the water at least 120 fms. deep. The 20 fm. level is driven west on lode in 35 fms., varying in size from 1 ft. to 3 ft. wide; the lode in the end is 1 ft. wide, worth 8*l.* per fathom; the back for several fathoms behind the end will pay well for working; judging from the ore sold, and the bottom, I should say there was some good bunches of ore driven through in this level; but the back towards the shaft has been worked, and is poor at present. In the 20 fm. level east the lode in the end is 2½ ft. wide, composed of spar, flookan, and a mixture of country stone (clay slate)—this end has a promising appearance, and I have no doubt but lead will be found further east; the level is extended from shaft 34 fms.; the back is all taken away that will pay for working. I could not see the 30 end east, in consequence of the level being filled with stuff; the captain informed me, the lode is large, and the level driven from shaft 30 fms. I would recommend driving this end as soon as possible, to prove the eastern ground about 5 fms. east of shaft; there is a winze sunk 6 fms. under this level; and in driving towards shaft, about 2 fms. up from the bottom, there is a good lode; the 30 east and west is poor at present, the lode is 4 ft. wide—this level is driven 39 fms., the lode large throughout; the back is taken away for several fathoms in length, and about 3 fms. high, which is poor at present, but I have no doubt in good bunches of lead being found between this and the 20 fm. level; about 6 fms. behind the end, in the bottom of the level, the lode will produce for 3 fms. long about 1 ton of lead per fathom; in driving this level 22 fms. from shaft a caunter lode was discovered, and it formed a junction with the main lode, where there was a good bunch of lead; the back in this place is stoped about 3 fms. high, where the lode is not rich at present; the caunter is driven on about 10 fms., the lode is 3 ft. wide, producing good stones of lead, I should think tributs ground, and would advise your giving this lode a further trial; a winze is now sinking near the junction under this level, which is producing a good rock of ore, and I would say likely to improve. In the 40 fm. level, driving west 14 fms., the lode in the back is large for 10 fms. long, with good stones of lead in it, perhaps work on a high tribute; in the last 6 ft. driving the lode is 4 ft. wide, composed of spar, capel, flookan, and lead ore, worth 16*l.* per fm.; I would advise sinking 12 fms. below the 40 fm. level before we drive; also, get down and communicate the new western with the 20 fathom level as soon as possible. I find the crusher is getting in order with all possible speed, which will make a great saving in dressing the ore. In conclusion, I beg to say, that it is my opinion, from the congenial strata in which the lode is imbedded, its promising appearance, the ores raised, and what is now to be seen underground, that you will, in a short time, have a profitable mine."

LANIVET CONSOLS.—The lode in the winze, sinking under the 70 fm. level, west of Elizabeth's shaft, is much as last reported; in the winze, sinking under the 70 fm. level (on the north part of the lode), east of Elizabeth's shaft, the leader part is 2 ft. wide, good saving work; in the rise, in the back of this level, the leader part of the lode is 15 in. wide, producing good stones of ore.

LEWIS.—The lode in the 60 east is 5 ft. wide, worth 16*l.* per fm. for tin, and very promising; in the 60 west we have commenced to drive south from Capel's winze, in order to cut the south branch, ground favourable. The lode in the 50 east, on south branch, is 1 ft. wide, worth 11*l.* per fm., and very promising. The lode in the 40 east is 3 ft. wide, worth 6*l.* per fm.—very much improved since my last report; in the 40 cross-cut, south from copper-ore shaft, we cut a branch producing some good work for tin—we intend to continue this cross-cut about 3 fms. farther south, in order to intersect middle lode; we are also extending the 30 south from Wheal Oak shaft towards Boswergie Town lode—ground favourable. The lode in the 20 east is 2½ ft. wide, worth 5*l.* per fm. for tin. The lode in Praed's shaft, sinking below the 8 fm. level, is 18 in. wide, producing some tin. The above shaft is now holed in the 20 fm. level, but find it was sunk on a lode, to the north of that in the present end, about 7 ft. Eudy's lode, in the 10 fm. level end east, is 1 ft. wide, worth 6*l.* per fm. for tin. I think, when looking at the different ends now driving, I may say with the greatest propriety, that our prospects heretofore were never so promising as at the present.—Sept. 4.

MENDIP HILLS.—We continue to progress very satisfactorily with our different operations in the slag department; both the fire and common bricks, &c., for the furnaces, are on the mine, and expect the masons will be here to-morrow, when we shall immediately commence building them. We are also making every preparation for the tram-road—such as laying out the grounds, cutting the wood sleepers, &c.: I hope the iron rails will shortly arrive, when no time will be lost in getting it together. The beds of slag from which the top rubbish is now being removed, continues to look remarkably well. The appearance of the lode in the 38 fm. level, south of Stainsby's shaft, continues much the same as it has been for several fms. past, composed of quartz, flookan, and strings of lead; occasionally the ground is rather harder for driving than it has been—present price, 4*l.* 15*s.* per fm.; in the winze, sinking below this level, we are down near 12 fms., where the lode is about 3 ft. wide, with two very regular walls, nearly perpendicular, composed of flookan, white spar, and particles of lead at times.—Sept. 6.

SOUTH DOLCOATH.—The engine-shaft is now 1 fm. 1 ft. 6 in. below the 40 fm. level—nearly deep enough for beams, cistern, &c. The lode in the bottom of the shaft is 3 ft. wide, composed of gossan, spar, iron, and mundic—a softer and more promising lode than has been seen in the shaft for the last 10 fms. The lode, in the 20 end west, is 2½ ft. wide, composed of gossan, spar, iron, mundic, and some spots of copper ore—a very promising lode. As we approach the cross-course, the water is increasing.—Sept. 6.

STRAY PARK.—In the rise, above the back of the 60 fm. level, the lode is 1 ft. wide, worth 8*l.* per fm.; in the 60 end, driving west, the lode is 10 in. wide, worth 8*l.* per fm. In the 70 end, driving west, the lode is 18 in. wide, worth 15*l.* per fm. In the 80 end, driving west, the lode is 1 ft. wide, worth 7*l.* per fm. In the 90 end, driving west, the lode is 2 ft. wide, worth 30*l.* per fm. In the 100 end, driving west, the lode is 2 ft. wide, worth 15*l.* per fm.; in the winze, sinking below the 100, the lode is 3 ft. wide, worth 20*l.* per fm. In the 110 end, driving west, the lode is 1 ft. wide, worth 6*l.* per fm. In the 120 end, driving west, the lode is 2 ft. wide, worth 12*l.* per fm. In the 124 end, driving west on Stray Park main lode, the lode is small and unproductive. In the 130 end, driving west, the lode is 1 ft. wide, worth 6*l.* per fm.; in the winze, sinking below the 130 fm. level, the lode is 2 ft. wide, yielding good stones of ore. In the 150 end, driving east, the lode is 18 in. wide, worth 8*l.* per fm.; in the 150 cross-cut, driving south, the ground is favourable—price, 7*l.* per fm. In the 180 end, driving east, the lode is 15 in. wide, worth 8*l.* per fm.; in the 180 end, driving west, the lode is 18 in. wide, yielding very good stones of ore. The tribute pitches are looking very well, and everthing is going on satisfactorily.—Sept. 6.

TRELEIGH CONSOLS.—At Christoe's shaft, in the 110 fathom level, the summpmen are cutting a plat, and preparing to sink below; in the 110, east of ditto, the lode is 2 ft. wide, rather improved in appearance, but not much ore; in the 110, west of ditto, but little done this week, no alteration; in the 100, east of Garden's, the lode is 2½ ft. wide, with stones of ore, not to value; in the 100, west of ditto, the lode is 20 in. wide, but little mineral. In the rise, above the 90 west, the lode is 20 in. wide, worth 4*l.* per fm. In the 80, west of ditto, the lode is 20 in. wide, worth 14*l.* per fm.; in the 80, east of ditto, the lode is 18 in. wide, with stones of ore. In the 70, west of ditto, the lode is 15 in. wide, but little ore. In the winze, below the 60 west, the lode is 3½ ft. wide, very kindly, producing stones of ore. In the adit east, on Parent lode, the lode is about 20 in. wide, very promising, with stones of ore. In the shaft below the adit, on Wheal Parent lode, the lode is 2 ft. wide, of a very kindly nature, with stones of ore, not to value. The new shaft, on Wheal Parent from surface, is sunk about 12 ft. in good ground.—Sept. 4.

WEST WHEAL JEWEL.—In the rise, in the back of the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, the lode is 1 ft. wide, worth 4*l.* per fm.—raised last month 3 fathoms. In the 30 fm. level, west of Hodges's cross-course, on Tolcarne tin lode, the lode is 18 in. wide, worth 6*l.* per fm.; driven west, 1 fm.; driven south, in search of main lode, 2 ft. In the 12 fm. level, west of Quarry shaft, on the same lode, the lode is 15 in. wide, worth 7*l.* per fm.; driven last month, 1 fm. 4 ft. In the adit end, west of Quarry shaft, on the same lode, the lode is 18 in. wide, worth 10*l.* per fm.; driven last month, 1 fm. 3 ft. In the 12 fm. level, east of Rowe's winze, on the same lode, driven last month, 1 fm. 4 ft. In the shallow adit end, west of Quarry shaft, on the same lode, the lode is 1 ft. wide, worth 4*l.* per fm.; driven last month, 3 fm. 1 ft. In the stopes, in the bottom of the adit, east of Pryor's winze, on the same lode, the lode is 2½ ft. wide, worth 20*l.* per fm.; stoped last month, 3 fms.

WEST WHEAL MARIA.—The lode in the 38 fm. level, west of the eastern engine-shaft, is without important alteration, 3 ft. wide, with good stones of ore; in this level we have resumed cutting plat, which we hope to complete in a fortnight from this time; we intend to continue on this level with four men, which we have taken from the 54 fm. level east, and in this level we intend keeping two men to drive; the lode in this level is about 2 ft. wide, composed chiefly of capel, spar, and a little mundic, at present unproductive. The western engine-shaft is down below the 54 fm. level 10 fms. 5 ft., where we intend cutting plat, and prepare for sinking under the 64 fm. level with all possible dispatch; the lode in this shaft is about 3½ ft. wide, with occasional spots of ore. In the cross-cut south, in the 54 fm. level, the ground is still rather hard for driving.—Sept. 7.

WHEAL ADAMS.—The western silver-lead lode, in the rise in the 50 fm. level, is still divided, and, no doubt, will continue so, inasmuch as the eastern part is the middle branch united with the other at this depth; we are now rising on the western part, which is at present hard and poor; it will, however, be necessary to effect a communication with the 40 fm. level as speedily as possible, as the air in the 50 is so defective, it precludes the possibility of extending the end south under the shoot of ore till this is accomplished. The jack lode is opening favourably, and we are now in a position to raise a fair quantity of this mineral; the lode will produce about 4 tons per fm., and about ¼ ton of lead. The eastern lode, in the 40 winze, is 4 ft. wide, consisting of friable quartz and lead; we have cut a stream of water here, which is too powerful for manual labour, and have, consequently, set to stope the north end, until the 50 south shall have been extended to drain the ground, to enable us to explore it to a greater advantage. The 40 end, on the western part, continues large and wet, but it is improving in appearance, and producing more ore. The 50 south continues without any alteration; the lode in the eastern part is 1 ft. wide, consisting of barytes and lead, but not rich; the lode in the northernmost end is 2 ft. wide, composed almost wholly of mundic and quartz. The large mass of barytes, in the back of the 18 fm. level, is decreasing, and the lode is, consequently, improving. We have cleared and examined the 40 fm. level north, for about 12 fms. in length, at which point it can be secured, but the remaining part is in such a bad state, that we really think it advisable to cross-cut about 12 fms. from the new engine, to intersect the eastern lode, and to extend a level north on its course to reach the old engine-shaft, instead of stoping the level on the jack course, as was first suggested. The little engine is working well, and will, no doubt, answer the purpose for which it was erected. The results of my investigations relative to the gossan, &c., will be given you in a letter which will accompany my next week's report.—Sept. 7

WHEAL TRELAWNEY.—The lode is just cut through in the 52 fm. level, where it is 3 ft. wide, composed chiefly of can, with spar and lead—worth 8*l.* per fm.; we have removed the shaftmen from here, to sink the engine-shaft to the 62, as fast as possible. The lode in the 42 end south is 3 ft. wide, and worth 14*l.* per fm.—this end is improved lately; the same level north, is worth 10*l.* per fm.; the ground is not so hard in this end as it has been. In the 32 fm. level north, the lode is 2 ft. wide, and worth 8*l.* per fm. The stopes throughout the mine are looking well. The lode in a winze, sinking under the 22 fm. level, about 7 fms. north of Trelawney shaft, is sunk 17 fms. 3 ft. below the 22. Vivian's shaft is sunk 8 fms. below the 20 fm. level, where the ground is good for sinking; the 20 fm. level is driven north from this shaft about 15 fms., through some good bunches of ore; the lode in the end is 3½ feet wide, producing ore that will pay for driving: we are sinking a winze below this level—lode 3 ft. wide, and worth 5*l.* per fm.—price for sinking, 35*s.* We hope to hole this winze to Trehane, 30 fms., in two months. The prospects of the mine altogether are encouraging; and, after we have laid open some ground at Vivian's shaft, I look forward to increase the samplings.—Sept. 8.

FOREIGN MINES.

AUSTRALIAN MINING COMPANY.—By desire of the committee of management, I had the honour of addressing you on the 12th February, by the *Royal Archer*, and on the 11th March, by the *Harpooner*, since when nothing new in our mines has occurred; and, anxious as you necessarily are for our advices, which the committee fully understand by their own constant desire to obtain information from the mines, still we must exercise patience. The promise of the adventures, both at Tungkillo and Wheal Rothschild, are perhaps equal to anything that can be conceived, and the concurrent opinion of all experienced men, who have been at the respective places, is, that eventually they must turn out rich in solid lodes of ore; but, notwithstanding this, at present we can only advise, that at Tungkillo we are working in well-defined lodes, and getting a moderate quantity of ore, and at Wheal Rothschild we are working in a country that often affords us what the miners call squats of rich ore; but in both places the works are carrying on more with a view to permanent working, than for immediate show. At Wheal Rothschild, the committee, having satisfied themselves of the richness of the surface deposit, are now sinking shafts in two places, with a view to get at the lodes by cross-cutting at some depth in solid country; and at the Reedy Creek, we continued sinking, having determined to go down to water level, before we drive on the several lodes. Permanent store dwellings, offices, and store-houses are now nearly completed at each place, and the accounts, to the 31st March, will be made up in April, and transmitted to you, showing the amounts expended, under the separate heads.

ANGLO-MEXICAN MINES.—*Guanaxuato, July 26.—Asuncion.*—I write briefly, and unsatisfactorily, for, notwithstanding that Mr. Parkman and myself have joined together most heartily in the reduction of memorias, we still have a loss on the past month; but so bitterly do I feel both that and the previous month, and so strongly and disinterestedly does Mr. Parkman urge the trial of another month or two, that I have consented.

Week ending	Memoria.	Sale.	Loss.
June 26	$314 3 0	$531 2 0	$48 6 0
July 3	284 4 3	520 0 0	24 4 3
10	388 6 5	461 7 0	157 6 11
17	313 4 4	423 7 0	101 4 10
Total loss on the four weeks			$332 6 0

Number of cargas sold in the month, 273.—Average price of carga, 8*l.*

Inclosed is finance statement, showing an asset of $28,244.—[By this packet the board has received the expected remittance from Mexico—amount, 4531*l.* 5*s.*]

BOLANOS MINES.—Received 6th September, per *Great Western* steamer.

EL BOTE MINE, *July 15th.*—I had last the honour of addressing you, relative to the underground works of the negotiation, on the 17th ult. In San Genaro shaft 12½ varas have been sunk, and 10½ timbered: at the depth of 115 varas, in this shaft, a cross-cut has been commenced, with a view to cut the vein in this level, and to open a communication with Guadalupe level, on the course of the vein. At San Fernando shaft, in the cross-cut de la Compania, we have driven to date about 10 varas; and, having cut a considerable quantity of water in the cross-cut, it has been discontinued for the present, and the shaft again recommenced sinking, as our main object is to sink a few varas in the shaft below this level for a sump, previous to our getting the rush of water, which may be expected from the cross-cut as it approaches the vein. In Guadalupe east the vein has much improved, both in quantity and quality—the productive part being at present about 5 varas wide, with ore of good ley. In the rise, on the back of this level, which I mentioned in my last had been commenced, the vein is rather disordered and poor. In Guadalupe west the vein has again become very much disordered and poor, and but few ores have been raised from this level during the month: the rise also, on the back of this level, has failed, and has, in consequence, been stopped. In the Poso de Guia, and Planes Nos. 1 and 2, the ore continues very good; and the planes being on a level with the Poso de Guia, which is about 9 varas below the level, the water we have in each, as yet, is light. In San Antonia west the vein, during the month, has become much disordered and poor; and, to all appearance, we have reached to the same stratum of ground, in this level, which caused the failure in Guadalupe below. The frente also (upper end) continues in good ore: in consequence of the level of Concordia continuing poor, it has been discontinued. Owing to the failure we have met with in Guadalupe west and San Antonio, two pozos have been opened in the bottom of Guadalupe east, to make up the deficiency.

Result of the month of June (four weeks).

Ores raised ..... 9096 cargas.
Profit ..... $18,118 6 7.
Estimated extraction for July (five weeks), about ..... 15,000 cargas.

CELESTINA MINE.—This mine continues promising, and the northern ends have improved somewhat lately; but the ore, though of good quality, still maintains its refractory character.

SAN FRANCISCO DE PAULA MINE.—This mine has shown but little improvement, and I only wait the communication of the footway to the fourth cross-cut, to determine what tutworks shall be undertaken to examine thoroughly the various veins, and ascertain at once if the mine be worthy of further attention. In Loreto I have resumed working, after four months of cessation (permitted by law), and the shaft of San Ignacio appears to be the most eligible point for our operations. The principal vein of Malanoche can be examined by it in a part where it is supposed to be unexplored (the old mine of Loreto, being on a different lode, farther to the south). The shaft is in a good state of preservation, and our working will not be attended with much expense.

General Results of the month of June.

	Profit.	Loss.
San Francisco de Paula Mine	$418 5 4	
Celestina Mine		$1928 6 0
Loreto Mine		20 0 0
Hacienda	1362 6 4	
	$1781 4 0	$1948 6 0
Profit		1781 4 0
Loss		$167 2 0

NATIONAL BRAZILIAN MINES.—*Cocaes, June 14.*—The produce being a trifle better, assuredly encourages the hope of obtaining more pleasing returns on extending our stopes easterly; but a month must elapse before we can expect to intersect another shoot of auriferous stratum, although an improvement in the general nature of the lode may from day to day be looked for.—Produce for eight days, 8 mks. 4 ozs. 6 dits. 3 grs.

Cuiaba, June 6.—The intelligence which we have to hand you by this opportunity is, indeed, of a most interesting character; it is true, this mine has apparently been very unprofitably worked for several months past, but this was from the circumstance, that the lode proved less productive than was anticipated at where we opened on it further east; consequently, we had no alternative but to push on the preparatory works to open the mine further west, where the lode is entire to the surface, and where we have commenced operations—simply quarrying on a large lode; this mode of working can be carried on very well during the dry season of the year, but it will be necessary to open stopes underneath, on the same line of ground, to excavate on during the wet season. Our mine is again in good working order, and we feel confident it will be most interesting to you when we state, that our produce for the past month is equal to 934 ozts. of gold, which has been obtained principally from the Quebra Cunha stopes: this is a greater produce than has been obtained from this mine, for one month, since Sept., 1845, when, at that period, the black force was 130—now 70, many of whom are old worn-out negroes.

PACHUCA MINES.—*Letter dated July 28.*—"Since my last, no discovery of ores has been made. We have been sinking San Guillermo shaft, and driving a cross-cut north from the same, in the 50 vara level. In the shaft, the lode still continues to produce occasional stones of ore; and in the cross-cut north, which has been extended 10½ varas without reaching the wall of the lode, the same appearance continues throughout. I can hardly believe that this great lode, composed of quartz, flookan, and gossan, with pintas of ore, which are the characteristics of the best lodes, will not, at a greater depth, yield ores in abundance. The San Pedro shaft is still sinking on a part of the lode, about 4 varas wide, composed principally of quartz. The flookan, which was so abundant upwards, seems almost to disappear in depth."

Ore on hand, 149 cargas.—June cost (5 weeks), $770.

REAL DEL MONTE MINES.—*Extract of a Letter, dated Mineral del Monte, July 28.*—"Your despatches of the 31st May, came to hand on the 17th inst., and I duly note what you remark on the disappointment felt by the directors at the unfavourable results of the concern for several months past; and I regret to state, that up to this moment our prospects are not materially improved. You will observe, that the entire cause of these results is the diminution in the returns of smelting ore. In the beginning of the year, the prospect was such as to warrant the belief, that we might continue to get 30 bars per month from the fundiciones alone; but, contrary to all our expectations, the rich ores almost suddenly disappeared from the planes of San Pablo and San Enrique, from which we had previously been extracting the principal part of the smelting ores. In addition to this, the water has increased in this place to such an extent, that it has been with difficulty we could continue any of our operations. You will see, by the statement of costs and returns, that we have been reducing the mine costs, which in June amounted only to $25,797. With regard to the general expenses, charges on produce, alimentos, &c., no reduction of importance can be made, while the concern goes on upon the present scale of working; and at the haciendas, although the expenditure is still heavy, it cannot be reduced while the present faenas are in hand. These together amounted, in the past month, to $26,046 7 6—making a total, including the mines' cost, of $51,843 6 6; the returns to meet which being $41,903 7 6, shows a loss of $9939 7.

Mines—Bucaina.—In the bottom of San Pablo winze, the lade is still disordered; the main part, we think, is on the south, which will be ascertained when it reaches the 216 vara level. The most productive part of these bottoms is situated west of San Pablo winze, where there is a small branch of smelting ore, 10 inches wide, but the ley is much inferior to that which we found above. The workings on the Santa Brigida vein, north of Dolores, in the vicinity of San Guillermo winze, promises to become more productive as the communication between it and the San Andres level has been effected. It produced last week 50 cargas of azogue, and 17 of smelting ore. The workings on the Tapona vein, in the 137 vara level, continue productive. The raisings have been from 300 to 400 cargas per week, with a prospect of continuing. The level driving east has passed through the Santa Brigada vein, on the north, but has not yet met with it going south. The vein at the point of the junction, I regret to state, is poor. By Captain Skinfill's report, you will observe we are making all the preparations in our power to keep the water to the depth of the San Enrique level, which is now approaching the Santa Brigida vein, when we may expect the whole of the water at that level. The La Virgen winze, below the Aviadero level, described in my last, was suspended, after being sunk 6 varas, owing to our not being able to drain the water. The lode in the bottom is upwards of two varas wide, containing a small quantity of smelting and some good azogue ore. Barreteros are now employed on the ore ground, in the ends of the winze. The Aviadero, driving east of this place on the Acosta vein, is looking very well. The lode is nearly two varas wide, one-half of which is ore, and a small part of it goes to the fundiciones. The San Bartolo winze, sinking below the Aviadero level, on the Santa Brigida vein, has also, I regret to say, been suspended, in consequence of the abundance of water. The lode in the bottom is composed of good azogue, with a rich bunch of smelting ore, a quarter of a vara wide. We have lately commenced another attempt to sink below the Aviadero, on the Santa Brigida vein, near the San Cayetano workings, where there is also a rich bunch of smelting ore, and a large quantity of azogue; I fear, however, we shall not be able to go very deep. The great object, therefore, in this mine, is to force on the San Enrique level, which, being hard, can be driven only at the rate of 1½ varas per week; we trust, however, to see it completed in 10 weeks to the Santa Brigida. At El Sacramento, there is nothing particularly new to notice, the best labore being still that situated 240 varas north of shaft, between the adit and 25 vara level, which alone yields 150 cargas of azogue ores per week. The raisings of ores from all the mines, during the last four weeks, have been as follows—4578 cargas azogue, and 235 cargas of smelting ores. It should be noticed, that the quantity of azogue can, if required, be much augmented, inasmuch as the mines of Santa Ynes and Rosario have been for some time idle, in consequence of the want of hacienda power.

Regla.—The result of operations at this hacienda, during the past month, has been satisfactory—although, owing to the small quantity smelted, the cost is higher than usual, being $16 per carga. The loss of silver amounted to 4½ per cent. The returns from the patio were unusually low, four tortas only having been washed, owing to the scarcity of quicksilver; and there are now three tortas on the patio floor not incorporated, for the same reason, and which will affect the returns. You will observe, that the remittances of ores to the haciendas last, have increased the stock upwards of 1000 cargas.

Sanchez.—I am glad to state, that the new barrels are at last brought nearly to a close, as nothing now remains to be done but to complete the wooden boxes underneath the barrels, and we expect to see them at full work some time next week. I have the satisfaction of stating, that the whole of the machinery has been executed and put together in a very superior manner; and the general arrangement of the whole establishment will be found exceedingly convenient."

UNITED MEXICAN MINES.—*Guanaxuato, July 26.—Mine of Rayas.*—By the annexed statement of produce and outlay, you will observe that the hacienda ores have experienced a further decrease; and do not, at this moment, produce an average of much more than 300 cargas per week, and, consequently, do not employ more than 32 of the arrastres in Barrera; the half sales, however, show a small increase—but they are, I fear, now retrograding again:—

4 weeks ending	Picked ores.	Half-sales.	Outlay.
June 19	Ca. 1538	$4332 5 4	$16,935 2 6
July 17	1278	4932 0 4	15,047 1 7
	Ca. 260 Decrease.	$599 3 0 Increase.	$1888 0 7 Decrease.

Santa Cecilia continues as unpromising as per my last, but the working of Santo Toribio has continued to improve, and now presents a very favourable appearance—showing a vein of good ore, of considerable width, though we cannot yet say of what depth, the lode in this part of the mine being of a fluctuating character. In other points there is no change for the better. As we are now in the midst of the rainy season, the water is again gaining upon us; and there is small probability of its being reduced to the shaft during this year, though it will depend much upon the season we may yet have. I inclose Mr. Glennie's report to the 23d inst.

Quicksilver.—I have received 64 bottles from San Luis since my last, but I fully depend upon getting quicksilver from England—and if I do not get some, I must again stop one of the haciendas.—W. HEATH.

Miscellaneous.—A "prestamo forzoso," of $56,600, has been levied upon Guanaxuato. We have, however, the assurances of the Governor, that we shall all be repaid out of the duties upon silver, and we really expect it. Under this assurance, the mining interest alone advanced the money—the United Company paid $2000 towards it, but it is to be repaid, by the duties, in two months.—W. HEATH.

Report on the State of the Workings of the Mine of Rayas.

July 23.—La Purisima.—Besides the small portion of ore produced by the dressers, who receive a share thereof, a few cargas of tierras, of fair ley, are occasionally extracted on hacienda account.

San Lorenzo.—The general produce from these old points is procured from the upper parts of the lode, as mentioned in last month's report. Little variation occurs in the nature of the ores, which are found scattered in small bunches over a considerable surface. A small extraction is made from the roof of the level of San Juan, to the north-west of the old powder-room. The ore in this point is met with in narrow bands, which, although rather scarce, is of fair quality. In Santa Martha nothing has been done during the last month. Nine pairs of barmen are now employed by day, and an equal number by night.

San Cayetano.—The ore having been extracted from the south-east side of the dry wall, in the pit of San Pablo, all operations in this part of San Cayetano have been suspended until the said wall shall have been sufficiently advanced to give proper security to the roof of these extensive workings, above the points from which the late extraction of ores has been effected. At the beginning of this month, a lot of 12 cargas of rich ore was sent to the hacienda of Barrera, which, when concentrated, gave 27 arrobas of polvillo, that produced 138 mcs. of silver. A small quantity of common ore is being extracted from the north-west side of the Pozo Grande, amongst which some bunches, of good quality, are occasionally found. In this point three pairs of barmen are employed by day only.

Santa Cecilia.—The change in the formation of the lode, referred to in last report as having taken place in this cross-cut, turned out to be merely temporary; for during the week immediately following the date of the same, the band, as it proved of a more compact character, was cut through, and the 5·33 varas that have been driven in four weeks, have passed through a part of the lode, containing broad bands, and large bunches of quartz, intermixed with earthy masses of a similar composition. The advanced part of the cross-cut continues in ground of the same formation, without showing any appearance of ore.

San Miguel.—In the pit of Los Inocentes, and the other two workings on this side of the mine, the ores are rather scarce; and, although the produce of the last four weeks has been low, it has been more than sufficient to cover the actual expenses of extraction, including the dressing of the ores, after deducting the cost of reduction. Eight pairs of barmen are employed by day, and an equal number by night.

Bunto Tordido.—On the north-east side of the bottom of this level, a body of ore, nearly half a vara in breadth, has been laid open, and is found to extend in a slanting direction, towards the west, under the ground through which the end had been driven, and, consequently, approaching the south-west side; here it is about a quar ter of a vara in breadth. The ore in sight is of excellent quality, exactly of the same character as that of the Malanche division of the lode. A week has transpired since this body of ore was first met with, and about 12 cargas have been produced.

This end is further advanced to the south-east than any other point of the mine, and is situated in that portion of the pertenencia of the mine of Garrapata that is included in the pertenencia of San Miguel—its exact position being 34 varas within the south-east, and 5 varas within the north-east, boundaries of the latter pertenencia. It will be necessary to suspend the driving of the level by "destajo" for the present, in order to extract immediately as much ore as can be procured—to which important object every effort must be directed; and, since the level is now of considerable extent, the want of ventilation may be the cause of only a limited number of workmen being employed—and this difficulty will be partially remedied by suspending the "destajo," and thus admitting an increased number of barmen to be employed on the body of ore. Steps have already been taken to cause an increase in the circulation of air in the points leading to this level, from which beneficial results are to be expected in the level itself. The thread of rich ore, mentioned in the last report, was followed up in the direction of the roof, but without leading to any improvement; the workmen have, consequently, been removed to the advanced part of the level. The water was lowered half a vara, after the date of the last report, in the first week; for the two following weeks it remained stationary; and, since that time, it has been rising slowly. A small quantity of good ore was extracted from San Simon; and, last week, the workmen were removed, owing to the rising of the water. A slight increase will be observed in the sales of ores on joint account with "buscones," but there is no point that calls for remark on the present occasion.—G. R. Glennie.

WHEAL CONCORD MINING COMPANY.

FIRST APPLICATION UNDER THE 116TH SECTION OF THE ACT.

Tavistock district of the Devon County Court—Monday. Before W. M. Praed, Esq., Judge.

Oats *v.* Weekes.—In this case an action had been brought against the defendant, who was alleged, by plaintiff, to be an adventurer in Wheal Concord Mine, and the judgment had been for the plaintiff for the amount of his claim. A variety of other suits were at the same time prosecuted against Weekes, in the same capacity of adventurer, with the same result—and warrants of execution were issued, and distress was levied, not on the goods and chattels of defendant, but on the mine, although notice had been served on the high-bailiff, Mr. John Brownson, to the effect that Weekes was not an adventurer in the said mine, and notwithstanding that a tender of 200*l.* (the aggregate claims being 170*l.*) was made to the bailiff's deputy in possession. It was also alleged, that the character of the seizure showed malice on the part of the officer of the court. The proceeds of the sale had been impounded—the consequence being, that the plaintiffs (principally workmen) had been kept without their money; whilst the adventurers affirmed that they were seriously damnified by the improper proceedings which had taken place. From what had occurred in court on a previous occasion, Mr. Beer, solicitor, of Devonport, attended this day, under the impression that the bailiff would have taken out an interpleader summons, that the matter might be brought before the court, and the money handed over to the proper parties. This the bailiff had not thought proper to do; and, inasmuch as the court declined to go into the case without the ordinary notice having been given, Mr. Beer, on the part of the adventurers in the mine, made an application to the court, under the 116th section of the Act, which relates to misconduct of bailiffs, or other officers of the court, constituted under that Act. Mr. Robins, solicitor, of Tavistock, appeared as advocate for the bailiff. The case excited considerable interest, both from its novelty, and its importance to the parties concerned.

Mr. Beer said, he had to apply to his honour in reference to certain circumstances alleged against Mr. John Brownson, the high-bailiff of that court, in regard to his conduct in improperly seizing, as he was instructed to allege, the goods of other parties, in execution of a warrant directed against the goods and chattels of a person named Weekes.

The Judge: Have you any affidavits of the grounds of your application, Mr. Beer?—Mr. Beer: No, your honour—I have *viva voce* evidence.

The Judge: Then, I am afraid, I cannot entertain it.—Mr. Beer: The section of the Act to which I have to direct your attention, gives your honour power to inquire into the matter in a summary way.

The Judge: So I hear all cases in a summary way.—Mr. Beer: But I apprehend, your honour, it is not necessary to do more than allege the complaint in open court, in order that your honour may at once inquire into the alleged misconduct, and punish the party, if called for, summarily.

The Judge: It strikes me, that the proper way to proceed would be by affidavit.

Mr. Beer submitted, that in a case like the present it would be exceedingly inconvenient, if it were to be driven from one court to another, in order that affidavits might be made, when he was prepared in open court to make his allegations, and to ask his honour to deal in a summary way with them. It would be a different thing, if persons had to be summoned, and notice had to be given; but here was a charge against an officer of the court, and all the parties were *coram judice*. The section of the Act said nothing about affidavits; and, in deference to his honour's judgment, he begged to submit that it would be much more convenient, and much more consistent with justice, and the interest of all parties concerned, if the matter were gone into at once. It was desirable that the person charged with misconduct should, as speedily as possible, give what answer he had to propound; and it would also be desirable, if the investigation could take place without any party being compelled to go to the expense of affidavits. The words of the section are these: "And be it enacted, that if any clerk, bailiff, or officer of the court, acting under colour or pretence of the process of the said court, shall be charged with extortion or misconduct, or with not duly paying or accounting for any money levied by him under the authority of this Act, it shall be lawful for the judge to inquire into such matter in a summary way—and, for that purpose, to summon and enforce the attendance of all necessary parties, in like manner as attendance of witnesses in any case may be enforced; and to make such order thereupon, for the repayment of any money extorted, or for the due payment of any money so levied, as aforesaid, and for the payment of such damages and costs as he shall think just; and also, if he shall think fit, to impose such fine upon the clerk, bailiff, or officer, not exceeding 10*l.* for each offence, as he shall deem adequate." He appeared that day to charge the high-bailiff with misconduct, and was certain, after his honour had heard the circumstances, he would be of opinion that this was a case which, at all events, should be met as the Act contemplated. The court was aware that judgment had been obtained against, and a warrant had been issued to levy on the goods of Walter Weekes, who, in the warrant itself, was expressly stated to be an adventurer in Wheal Concord Mine. Now, it was notorious to the officer, that the party so alleged to be an adventurer, could only be one of many adventurers.

The Judge: Why might he not be the sole adventurer?

Mr. Beer: It was very true that a man might be the sole adventurer in a mine; but from what had taken place in regard to this mine, and from his local knowledge generally, it must have been notorious to the high-bailiff, that the person named in the warrant, if an adventurer at all, could only be one among other adventurers concerned in that mine. His attention being thus drawn to the fact, it must have been evident to him that the goods, upon which he purposed levying, were the property of other parties. But it did not rest there. He should have been quite prepared to submit that a very grave case was presented against the bailiff, if he levied under these circumstances merely—that was, if he levied upon these goods without information whether the man was a sole adventurer or not; because, as it seemed to him, the most lamentable ignorance of the bailiff as to what was his clear duty in this respect, or something worse than ignorance, had led to consequences for which it would be difficult indeed to obtain an adequate remedy. His honour knew the law in relation to partnership goods much better than he (Mr. B.) did—and the duty of the bailiff, in a case where the parties must have been co-partners and co-tenants of the property, was quite plain; therefore, unless it was pretended by the bailiff that he did not know that the debts were recovered of one individual, he had no right to seize and sell the property of other men, with whom it might be supposed the person named in the warrant, was connected in a speculation. That was the first ground alleged of the misconduct of the bailiff. He had no pretence for selling the property belonging to others, under a belief that they were in partnership with the man whose goods he was authorised to seize. But if he had no pretence, in the absence of information, to proceed as he had, what possible pretence could he have, after he had received a notice that Weekes was no adventurer in Wheal Concord Mine? The allegation was, that he was an adventurer, and upon that the warrant had been issued. The notice was, that he was not an adventurer; and the bailiff was fully warned, that if he proceeded under that warrant, he would be liable to all the consequences. That brought him (Mr. B.) to another portion of the statement, which, with submission, he thought ought to be inquired into, independently of all other considerations. The object of this Act of Parliament, was to enforce the payment of small debts not exceeding 20*l.* in amount; and it required the clerk, the treasurer, and the other officers acting under its authority, to give such security as the Lords of the Treasury should direct. But he submitted, that this was a case not of the nature of those "small debts" in respect to which the Act provided; it was one which involved very serious consequences, and was, in every point of view, fraught with results to the adventurers that it was difficult to overstate. Allowing that this bailiff did wrong—considering that he had received a notice which told him the defendant was no adventurer whatever in the mine—bearing in mind (for what other conclusion could any man come to, who looked at the continuity of circumstances) that the tissue of acts by the bailiff could only be referable to malice, where was the remedy called for by the injury sustained, and the conduct of him who had caused it? Here was a man who came in, not only with the warrant obtained at the instance of George Oats, but with warrants in which a variety of other persons appeared as plaintiffs—not to a levy to the extent of 20*l.*, the limit of the small debts, to recover which the provisions of the Act applied, but for 170*l.*: he knew, if Walter Weekes was an adventurer at all, he was so with many other parties; but he was warned he was no adventurer at all, yet he dares to go on. Nothing was able to stop the proceedings he was bent upon; and that, on his own individual responsibility and knowledge, or want of it, he consulted nobody; he never went to the clerk of the court; he never asked the opinion of his honour; he sought no assistance whatever, but proceeded. And what was the remedy? The Act of Parliament only gave the court the power of dismissing the bailiff, and fining him 10*l.* for each offence—was that a remedy? Was that a recompense to the parties who, he believed, by the express connivance of the bailiff had been wronged? He had said this notice was served, but it did not end there. His honour would readily understand, that on every working mine there was a great quantity of materials, absolutely necessary to the mine being carried on; and the most important of all was the engine, which kept it in motion. The extent of the levies which the bailiff had to make was 170*l.*; and on the surface of the mine was a quantity of property, which had since been sold, and had realised a sum far exceeding the amount named—that property consisting of materials of every description, which might easily have been seized by the bailiff, had he chosen. He did not so choose, and that was only in accordance with the principle which appeared to govern his first act. He preferred doing what was called turning the engine idle—he had the engine stopped, and an end put to the working of the mine at once.

Mr. Brownson (the bailiff): No, no.

Mr. Beer was not to be met by denials. He stated nothing but what he was prepared to prove by witnesses. If he did not prove all he asserted, he could only say, that the parties who had instructed him would not only have done exceedingly wrong, but have given the best justification possible of the conduct of the bailiff. Not only had that been done which was already stated, but the engine was seized. As was well known, the engine of a mine was a matter of very serious expense. The engine in the present instance cost 107*l.* That engine was seized, and sold to satisfy a debt of 12*l.*; when materials on the surface of the mine were worth, and had realised, much more than that amount. The bailiff was disinclined to levy upon them; and the question was, whether that was, or was not, sufficient to show the existence of some improper motive for all these proceedings. It appeared, Mr. Brownson executed the warrants himself. He afterwards left them in possession of a man by the name of Warren, as the deputy-bailiff. The Act of Parliament did not give this court the same power over those under the bailiff, as over the high-bailiff himself. The high-bailiff was an officer appointed by the court, and dismissed by the court; and he was responsible to the court for the appointment of efficient persons to act as bailiff in his absence. This man left Warren on Wheal Concord Mine, and it would be easy to judge what care had been taken in the selection of an efficient, or, in the words of the Act, an "able and fit" person. The 109th section of the Act was as follows: "And be it enacted, that in or upon every warrant of execution, issued against the goods and chattels of any person whomsoever, the clerk of the court shall cause to be inserted or indorsed the sum of money and costs adjudged, with the sums allowed by this Act as increased costs for the execution of such warrant; and if the party against whom such execution shall be issued shall, before an actual sale of the goods and chattels, pay, or cause to be paid, or tendered, unto the clerk of the court out of which such warrant of execution has issued, or to the bailiff holding the warrant of execution, such sum of money and costs as aforesaid, or such part thereof as the person entitled thereto shall agree to accept in full of his debts, or damages and costs, together with the fees herein directed to be paid, the execution shall be superseded, and the goods and chattels of the said party shall be discharged and set at liberty." When this man was found in possession of the engine, and proceeding in the way he did, after notice had been served, intelligence of the circumstance was conveyed to Mr. Snell, of Callington, the purser of the mine, and he rode to the mine. He immediately inquired for the man in possession of the warrants, and was introduced to Warren, whom he desired to give the particulars of the warrants under which he held the mining property. He was unable to do this; but Mr. Snell, knowing that 200*l.* would cover the claims, took out two Bank of England notes, payable on demand, each for 100*l.*, and tendered them to the man. If Warren had been a person properly instructed, he might probably have said, "the demands are only 170*l.*, and I am not bound to break the second 100*l.* note to give you change;" but the only answer was, "you must go to Mr. Brownson; I have nothing to do with it."

Mr. Robins: What was the amount of the tender.—Mr. Beer: Two Bank of England notes, each of 100*l.* The man was told he might take the money, and keep it until the parties had consulted, and return the balance afterwards at some convenient opportunity. It was not to be presumed that this was a mere tender, with a view to get rid of the execution: it was notoriously known to Mr. Brownson, within 12 hours after that transaction, and immediately after the written notice, that Weekes was not an adventurer in Wheal Concord Mine; and then a printed notice cautioning all parties not to go to the sale was served—yet, in the face of all that, and with the knowledge which Mr. Brownson possessed, that he was seizing partnership property, he determined to proceed. With this resolution, he sold the engine which, as he said before, cost 107*l.*, for 120*l.*; and a capstan rope, which cost 92*l.* for 6*l.*; he sold altogether property, amounting in value to more than 120*l.*, for 17*l.*, to satisfy that execution; and at that very time were moveables laying about the mine which, at a most disastrous sale since, had fetched 260*l.* If ever a case under this, or indeed any Act of Parliament, demanded a most grave and serious inquiry, he took the liberty with deference to the judgment of the court, to insist that this was a case of that kind. He said that, if this had been an execution for a sum under 20*l.*, and the same extent of injury had been done a poor man—if to recover some 5*l.* the bailiff had gone to a poor man's house, and had acted upon the principle on which he had conducted himself in reference to this mine—an outcry would have been raised from one end of the district to the other; public indignation would have been excited at so monstrous an injustice, nor would the tumult have been stilled until the bailiff was dismissed from his situation, and was punished to the extent that the law prescribed. Undoubtedly, the adventurers in this mine were entitled to the same amount of consideration, to precisely the same measure of justice as the poor man. It was not because they were many, it was not because possibly they might be wealthy, that they were to suffer for any man's self-confidence, ignorance, malice, or connivance with other people. Why did he seize the engine? and if he did not seize the pumps, why did he stop the men? why did he seize the capstan rope? why did he seize property 20 times the value of the amount of the execution? It was done, he (Mr. B.) believed, with the same reason with which the tender of 200*l.* had been refused. He had not only forgotten his duty to the defendant in this case, his duty to the court, and his duty to himself; but his duty also to those poor men who had endeavoured to obtain their money, but who were still kept out of it by his having proceeded to this extremity. He had heard it asked, why other parties did not bid, when they found the property selling at so low a rate; he praised them for not bidding, seeing this man commenced in the spirit he had; he praised them for seeing how far he would go, how far in the face of this court he would attempt to commit misery, and mischief, and ruin. Where was the remedy? He might bring an action against the bailiff, he might adopt that course with a view to compensate the adventurers for the loss of 1000*l.*, or 1100*l.*; but where would be the remedy in such a proceeding against such a man? If he were an uneducated man, and embarrassed by the notices he had received, and the information he had derived, he had gone to the clerk of the court, if he had applied to his honour for advice, if he had gone to any solicitor for assistance, there would have been no room for many of the remarks he had made that day; but when he found a man so recently appointed, who had given, as he understood, no security to the court, selling all this immensely valuable property after such notices, after such a tender, under such circumstances, and at such a price, he did say he was entitled to infer that which the bailiff ought not to have rendered himself in any way suspected of. These things called for the most stringent inquiry; it was the first act of misconduct since the constitution of these courts, and it called the more loudly for inquiry, because, if it were once suffered to pass by in a great case like this, it was more likely to be practised in a poorer case hereafter. He knew that, if he went before a jury at *nisi prius*, he might well call on them to give exemplary damages, for the case was marked by a string of circumstances, which placed it beyond a parallel. In the case of an injury, done by a sheriff's officer, his remedy was against the sheriff; and it was well known that no sheriff's officer would sell the goods belonging to a partnership, without ascertaining the partnership interest; but Mr. Brownson appeared on this question to have taken no heed, no pains, and no care. He ought to have had the fullest acquaintance with the Act of Parliament, and ought to have been most anxious to proceed in strict accordance with its provisions, when he had the warrants in his hand. Mr. Beer then proceeded to show that the tender of 200*l.* was a good and sufficient tender in law, drawing the attention of his honour to "Wood's" case, and the case of "Ashby *v.* Strange."

The Judge: There is no doubt that, if the words used were, "provided you give me the change, I'll give you these notes," it would have been an insufficient tender.—Mr. Beer: Precisely so; but here was an unconditional offer of the money, upon which the case of "Black and Smith" was conclusive. That tender was refused by Warren, the deputy of the high bailiff—for which act the latter was responsible, for it was expressly enacted in the 33rd sec., that "every such high bailiff shall be responsible for all the acts and defaults of himself, and of the bailiffs appointed to assist him, in like manner as the sheriff of any county of England is responsible for the acts and defaults of himself and his officers." He complained of the distress also—the statute relating to distress for rent made the levying of an exorbitant distress a very serious offence; this distress, in his opinion, was not only unjust but exorbitant; yet, it was a case in which he was at a loss to know what remedy could be obtained under the statute. There was no certainty of obtaining any penalty, though Mr. Brownson might be respectable in his position; for as to the security—

The Judge: I believe there has been no security given yet.—Mr. Beer thought it a most serious matter that this man should have to execute these important trusts, involving as they did hundreds of pounds, and damnifying parties as they might, to the extent of 1000*l.* or 1200*l.*, or more, without giving security. To refer again to the sale for one moment—the engine, which cost 107*l.*, was sold for 120*l.*; and that upon three bids, as he understood, by the same man; he first bid 110*l.*, and then, thinking he ought to advance upon himself a bit, he bid 5*l.* more; and then, perhaps, thinking it rather too cheap, and nobody being disposed to help him, he bid another 5*l.* upon himself, and got the engine. He understood also that there had not been sufficient notice of the sale, but he was not sufficiently instructed upon that point, to make it a ground of complaint. He had heard it stated, as a fact, that one man had boasted of having got hold of property at that sale, which he would not part with for 120*l.* profit. He asked his honour to look at all these facts—first of all the neglect of the bailiff in ascertaining his right to sell the partnership property, and the fact of the defendant being an adventurer in Wheal Concord; secondly, the notice that he was not an adventurer; thirdly, the notice not to go to the sale; fourthly, the tender; fifthly, the seizing of the engine; and sixthly, the moveables on the surface of the mine, adequate to meet these demands, and he trusted his honour would be convinced, when he had heard the whole of the evidence, that such a case had been made out under this Act, as he hoped they would never hear of again as long as they lived. He trusted he should be excused the length of these observations—because he felt, as no doubt his honour did, this to be a case of the utmost importance, not only to the adventurers, not only to the plaintiffs, not only to the town of Tavistock, but to the public at large, but to this court in particular. The bailiff had, perhaps, his honour only excepted, most to do with this Act of Parliament, and could not readily be excused doing that which was wrong, and he was astonished to find he had declined taking out a summons under the interpleader clause, and if he did not choose to avail himself of the clause designed for the benefit of the bailiff, he must stand the consequence. Up to the present moment no application had been made, though there were conflicting claims for the money, which had been very properly kept by the clerk; but he seemed only to care about following his own unadvised opinion—and, as it would appear, that greater than the judge of this court, greater than the clerk, greater than all the officers, yes, greater than the high sheriff of the county, was this Mr. Brownson, bailiff of the County Court of Devon, at Tavistock. He would stoop to no authority, would ask nobody's leave, and solicit nobody's opinion; would do what he pleased, would sell goods in spite of notices, and levy upon property 20 times the value required; and when the money was impounded, when the plaintiffs complained, and the defendants demurred, he would have no inquiry, and consent to no investigation.

The Judge: There certainly was no claim before me to justify my going into the case this morning.—Mr. Beer would not re-argue that with his honour, but he understood Mr. Brownson to have said, he never knew such a power was in the Act of Parliament.

Mr. Brownson: I never said so.—Mr. Bridgeman, the clerk: He certainly said so, and I took a note of it.

Mr. Brownson: Why should I bear what I do not deserve? It is a conspiracy against me.—Mr. Beer: I am quite sure the inquiry will set the matter at rest; and, at least, we shall have the satisfaction of having exposed these transactions, and of receiving from your honour such remedy as is in your power to give.

The Judge: The only difficulty is, how this inquiry should be conducted—I retain the opinion that there should be affidavits in the case of magistrates; they receive information upon oath, and then issue their warrant, and require witnesses to be in attendance—so I think there should be affidavits here, which would enable the court to call on the bailiff to answer the charge so made. How else can I enforce the attendance of witnesses; I am very sorry that the case should be delayed, and am disposed to take it at the earliest opportunity; I regret any delay, but I think the proper course is to file affidavits.—Mr. Beer: I am quite willing to take that course, and adopt the opinion of the court.

The Judge: They should be in the form of an information.

Mr. Robins believe I his honour would have no objection to hear one word on behalf of the officer of this court; all the vituperation, the anathemas, and he must say abuse, which Mr. Beer could employ, had fallen on Mr. Brownson, who was as honest a man as the sun ever shone on. This was the first time he had ever been impeached; and he had to thank God for having a good head on his shoulders, to carry him through all this.—The Judge: The better way will be to prove all that.

Mr. Robins had been astonished to hear the extraordinary things alleged by Mr. Beer; and he challenged him in that hall, and before the people present, to prove a single act of malice against Mr. Brownson. Mr. Bear hall, no doubt, been wrongly instructed, and he knew there was not a single tittle of evidence to prove any malice or connivance with any other party.—Mr. Beer: It is perfectly unnecessary to discuss this matter further now.

The Judge: I think it better that the inquiry should take place in proper form; and I have only to request all persons present to suspend their judgments, as I hope I shall, until that inquiry, and not to believe any man guilty of impropriety upon statements made to-day.—Mr. Robins then made some other observations, with a view of showing that the tender alleged to have been made was neither a legal nor a reasonable tender, and this was the only point he considered meriting an answer at present.

The court fixed next Monday week, as the day on which the inquiry should take place.

United Mines.—An action was brought, in the Stannaries Court, by Thomas Hodge, against Capt. Francis, one of the principal adventurers, to recover the amount earned for working a tribute pitch, at the back of the 112 fm. level, for four weeks, at a tribute of 10*s.* in the 1*l.* The plaintiff raised 103 kibbles of ore in the course of his month, and claimed 22*l.* It was contended, for the defendant, that the ores for which the plaintiff claimed to be paid could not have been either broken in the pitch, or raised from the stull—a fact which had been ascertained by actual measurement of the cubic contents of the stull, and of the several places in which the tributers had worked. Two tributers, working in other parts of the mine, and who had to pass daily under the plaintiff's pitch, saw the stuff thrown down, always had to pass over it, and they frequently remarked that it was not worth sending to grass. Another circumstance was, that the whole of the smith's cost to these men for the month was only 1*s.* 8*d.*—which the plaintiffs endeavoured to explain away, by stating that they had brought sufficient tools to work through the month; another was, that they used neither gunpowder nor safety fuse; they also trammed their own stuff, which was quite contrary to the rules, as the adventurers always provided trammers at their own expense—this the plaintiffs met by saying, that they had gunpowder and fuse from a former work, and that the place where they worked was distant from the tramroad, and they were obliged to work the ore to that spot. Numerous witnesses were called to support the defendant—all of whom had worked in the mine during the same period; and it was stated in evidence, that from the stull and pitch together not more than a ton could have been produced, worth 2*l.* or 3*l.*—The Vice-Warden summed up at great length; and the jury, after two or three minutes' deliberation, found a verdict for the defendant. It is but justice to state, that no ore had been missed from any part of the mine.

South Wheal Francis Mine.—At the Stannaries Court, an action was brought by Mr. Brunton, the engineer, of Illogan, against Messrs. Williams and others—the managing committee of the mine—to compel them to transfer a share which had been purchased by him. The case arose out of the conduct of Mr. Philip Vyvyan Robinson, the late purser, who is now in France. It appears he left a power of attorney with his son, Mr. P. V. Robinson, jun., to sell three shares, which he still held; one was, accordingly, sold to plaintiff for 140*l.*, but which the defendants refused to transfer, alleging that there were calls due upon it; these calls had been tendered, but refused, as also the claim made for interest and dividends since October 17, 1846. The question appeared to be—whether the accounts of Mr. Robinson, as an agent and as a shareholder, be so connected that they should not be divided, and that the adventurers should refuse the transfer of Mr. Robinson's shares while the accounts remained open?—Mr. Hockin replied, that the claim now set up, and the refusal to transfer under it, was totally opposed to the custom of this county, which was to assign shares without any other lien being attached to them than the back costs. He trusted his honour would give him the opportunity of going to a jury, and showing what was the custom of the county in regard to transfers.—The Vice-Warden said, that what Mr. Hockin had urged was worth consideration. The practice of the neighbourhood might be recognised in the terms of a mining partnership and he should take time to consider the subject.

TIN BOUNDS.

TO THE EDITOR OF THE WEST BRITON.

Sir,—Your correspondent, "A Tin Bounder," says, that the interpretation which I have given to the nature of the holdings called "tin bounds"—[see *Mining Journal* of the 28th August]—is such as is taken by the enemies of bounds; and that the bounder makes his property legal by means of annual renewal, or making out the corners. But I contend, that he is also bound to continue to work the ground fairly, and pay the landlord the specified dues. Referring to the proceedings of the convocation of stannators, in the 12th year of Charles I., it appears to have been ruled by them as follows:—

In the third section, after stating what lands may be bounded, it says—"The tinner paying out of such land, so bounded, the usual toll only as is generally paid within the stannaries—that is, the 15th dish, or part—saving in such places where a special custom hath limited another rate of toll."

The fourth section says—"We present and affirm our general custom of gaining and keeping right in bounds to be by new pitch and renew, in such manner as it now is, and anciently hath been, in use in the several stannaries; which said general custom we limit, ordain, and agree, that it shall be thus understood—viz.: that an owner working his tin-work by himself, his wages man or farmer, paying toll once a year and a day, or otherwise continuing his working without fraud in driving an adit unto or sinking a shaft upon the said work, and withal preserving the four corner bounds, so as they may be seen or sufficiently proved, if they, or any of them, shall be newly or casually or maliciously defaced, so long the said owner shall not lose his bounds for default of renewing."

And, in the second year of James II., the stannators have provided that, if the bounders leave their bounds unwrought, other tinners may enter and work them. Now, the question appears to be—can the *law*, which gives the right to the bounder, be superseded by a *custom* of his own? It appears, by the late decision of Lord Denman, that he does not consider that the *custom* can supersede the *law*. Some ridiculous customs are mentioned as to the holding of certain manors; but I do not see how those customs can have any bearing on the question of tin bounds, or that they are any example of custom superseding law. With respect to the charge that bounders prevent grounds from being worked: if the claim of the *custom* be good, it is evident that no bounded ground would be worked, unless it would afford some profit to the bounders after paying the dues to the landowner; but, if the custom could not be sustained, then, of course, the landlord would let the work for the best terms he could get—perhaps 1-20th or 30th. What is said about the bounder being "the original setter, and after the bounder has received his dues the lords come in for theirs," does not in any way affect the question. In fact, the original setter is the Stannary Court, which has legalised the setts, called bounds, under certain restrictions. There can be no objection to the bounder letting the work, provided it be fairly carried on, and that the landlord be paid his 15th dues.

Falmouth, August 27. T.

ACCIDENTS.

Shocking Death of a Collier in Scotland.—On this day week, Andrew Smith, met his death under very melancholy circumstances, at a coal-pit about two miles from Loanhead. It seems that about 10 days previously, foul air was found to have collected in the pit, and, in consequence, the colliers ceased working in it, and were employed in sinking another one, 50 yards distant, to procure ventilation. On Saturday, Smith, as was customary among the men, had left his companions, and repaired to the old pit to see whether the foul air was diminished. He had accordingly descended the pit some 30 ft., when he found he was unable to return. Some time elapsed before he was missed, and his perilous situation discovered; even then it was found almost impossible to relieve him; and no less than 10 attempts to descend the pit were successively made, and as often abandoned, from the person being unable to descend to a sufficient depth. At last, a man (James Fowler) succeeded in getting a rope round Smith's body, when it was drawn to the surface, where Dr. Falconer was in attendance, but who immediately announced that life was extinct. The unfortunate man was heard moaning for fully two hours after he was discovered; but three hours and a half elapsed before his lifeless body was extricated: he was 31 years of age, and has left a widow and three children.

Castle Eden Colliery.—J. Clangham, whilst ascending the shaft, fell out of the cage on a bunting, placed a few fathoms below, and received so severe a fracture on the head as to kill him.

Fatal Accident at Delabole Quarries—Four Lives Lost.—Early on Monday morning last, as a few of the men who work on the rubbish in the higher Delabole quarry (T. K. Avery's) commenced working, a large quantity of rubbish gave way, and fell into the pit where they were employed, and killed four of the men; one other (the fifth) was taken up with both thighs and both arms fractured, and much bruised about the head and trunk, so that slender hopes are entertained of his recovery. If it had fallen a little later, scores of lives must have been sacrificed.

Newfield Colliery, near Tunstall.—G. Wittinshaw was killed by a large iron balance falling on him while working at the bottom of the pit.

West Wellwood Colliery, Muirkirk.—After the workmen had got up, a lad, named James Shankland, having left a napkin in the pit, wished to descend for it; another lad, named Augus (one of the workmen, who was standing at the pit's mouth), volunteered to lower him, and was recklessly permitted to do so by the engineman, named Oswald. On Shankland getting into the basket, Angus, by some mismanagement, reversed the engine, when the former was accordingly carried over the pulley, and, falling headlong into the pit (32 fms. deep), was literally smashed to atoms. Both Oswald and Angus were apprehended by Thomas Edie, criminal officer, on Monday, at Muirkirk, and committed to Ayr Prison.—*Ayr Advertiser.*

HARROWBARROW OLD MINING COMPANY.

A quarterly meeting of adventurers was held at the Globe Hotel, Plymouth, on Thursday, the 2d September,—Edward Prion, Esq., in the chair.—Reports from the committee and Captain Paull having been read, were adopted, being considered satisfactory by the meeting. It was resolved, that the proceedings of the committee since the 1st of June last, as also those of the special general meeting, held on the 16th of August last, be confirmed; and that the thanks of this meeting, and the adventurers generally, are due to the committee, for the unremitting attention shown by them in the execution of their duties; and that the same gentlemen be re-elected for the ensuing quarter, with full power to add to their number, and to carry out and conduct the affairs of the mine on behalf of the adventurers. A call of 1*l.* per share was made; and the purser empowered to take the most stringent measures against defaulting shareholders, for compelling the payment of their back calls. The following report, from the mining captain, was submitted:—"At the surface of the mine, the engine-house has been built, and nearly covered in—a few hours more will complete it. The stack of chimnies, intended to take the smoke from the engine and burning-houses, is in course of progress—about 12 feet high; and various other matters in active work. The reservoir is completed, and the bob is fixed in the engine-house, and good progress made with the carpenters' work generally—so that we hope, in the course of four or five weeks, to have our engine in good working order. The smiths' shop and carpenters' ditto, &c., are also building, and will soon be completed at a small expense, say about 80*l.* In the underground department our attention has been principally confined to the sinking of Good Luck shaft, in the great tin lode, for our future engine-shaft; the progress of this job has been satisfactory, though the ground from the 16 fm. level to the 28 fm. level has been rather harder than was expected. We have worked at three points—viz.: from the 42 fm. level upward, towards the 28 fm. level, and downward from the 28 fm. level; these points have nearly met—perhaps, before this, the hole is made, as I conversed with the men from

the upper place, while I was in the rise below, this day. In the course of working this piece of ground, we have, at times, had some good work for tin, in a large lode, near 6 ft. wide. There remains, between the 16 and 28 fm. levels, about 10 ft. more to do. Before I conclude this part of my report, I beg to say that this job might have been finished long ago; but, as we shall be in good time for our engine-work, we have limited the expense. In the tribute department, we have purposely avoided setting more than one pitch, and that below the 28 fm. level, east of Good Luck shaft; this ground looks very well, and turns out good work; the price given to the men varies from 6s. 8d. to 10s. in the pound. Many other pitches might have been worked; but we have broken so much stuff in the great shaft as to prevent our drawing it to the surface till the shaft is finished. The quantity of tin on the mine is about 7 tons."

MENDIP HILLS MINING COMPANY.

The second annual general meeting of shareholders was held at the offices, Finsbury-square, on Friday, 10th September.

P. STAINSBY, Esq., in the chair.

The following report of the directors, and accounts, were submitted:—

REPORT.

The committee have much pleasure in meeting their fellow shareholders, and in laying before them the accounts for the past three months. The operations at the mine for the past year are fully set forth in Capt. Harpur's reports; and though they have not been attended with the success the committee had by this time anticipated, still there are works going on of an inexpensive nature, which may, and probably will, in a short time, more satisfactorily prove what may be expected there. The attention of the committee is now mainly directed to the development of that part of the company's property in the grant from Lord Clifton of the slag ground. The committee stated to you, on a former occasion, that they were then using every exertion to obtain the grant of this ground; they are now happy to inform you it is secured, and operations have been going on there for the past seven months. A very large bed of slags has been laid bare; the apparent great obstacle of obtaining water has been overcome, at much less expense than was anticipated: this, and other operations, are fully explained in Captain Harpur's report. The several members of the committee have repeatedly visited the property during these operations, and the construction of a further most important work, necessary for the economical working of the immense quantity of slags, now proved to be deposited in the grant. Your committee beg to assure you, that every exertion on their parts has been most anxiously directed to the development of this property, which they have every reason to believe, will not disappoint the expectations anticipated. Mr. Johnson has just returned from the Mendip Hills, in company of Mr. Fowler, one of the committee, and made all arrangements for the erection of furnaces for smelting the slags, and, being present, will answer any questions the shareholders may require.

Abstract of the Accounts for Twelve Months, ending July, 1847.

To amount of costs, from August, 1846, to July, 1847			£1818 14 4
Disbursements—London management	£200	0 0	
" Directors' attendancies	250	0 0	
" Petty cash—three years	46	12 5—	496 12 5
Balance from last annual account			134 15 6
Balance			199 17 9
Total			£2650 0 0
Received on first instalment	£100	0 0	
Ditto on second ditto	1007	10 0	
Ditto on third ditto	1086	15 0	
Ditto on fourth ditto	503	15 0	
Total			£2650 0 0

Balance, 199*l.* 17s. 9d.; calls due, 970*l.*—making a total balance of 1169*l.* 17s. 9d.

The following captain's report was read to the meeting:—

Mendip Hills Mines, Sept. 9.—In presenting you my report for the general meeting of shareholders, I beg first to offer a few remarks on our proceedings underground during the past year. At the commencement of the present year our operations were extended to four different points—viz.: driving the 25 fm. level, north of Barwell's shaft, which is situated near the south boundary of the sett; driving the 20 fm. level, north of Somers's shaft, which has been driven to the extent of 85 fms. on a very large lode, occasionally producing large stones of lead in the last 40 fms. driving; and driving the 20 fm. cross-cut, west of new shaft, to communicate with the 20 from Somers's, which are situated in the eastern part; also, in sinking Stainsby's shaft, below the 38 fm. level. Some time since, it was deemed advisable to suspend the whole of our eastern works, and confine our operations to one point only—Stainsby's shaft; which, from its appearance and situation being in the low ground—also, from the numerous lodes, or veins, which traverse this part of the sett—was thought most likely to prove productive—consequently, this shaft has been sunk to the depth of 59 fms.; the first 20 fms. from surface was sunk through the rubbish left by the ancients, where we found the lode to be 9 ft. wide—the remaining part (39 fms.) has been sunk through unbroken ground, where the lode, in some parts, is 10 feet wide, composed of flookan and white spar, intermixed with large lumps of good quality lead; near the bottom the lode became much smaller and harder, with a little water issuing from different parts of the lode; here we have suspended operations for the present.

Some distance south of this shaft there is to be seen at surface a large lode, bearing about 30° west of north, which intersects the one we are working on; from its bearing and underlay it was expected, by extending a level south in the 38 fm. level, we should cut the junction of these lodes in about 60 fms. drivings—this we have not yet attained, in consequence of the lode not underlaying so fast as we expected; from its appearance at surface, I would recommend to drive this end a few fms. further, to ascertain whether the lode continues down, or not, as large deposits of ore are often found at these points: the lode in the end at present assumes a more promising appearance than we have had it for some time before, being about 2 feet, composed of flookan, quartz, and spots of lead at times. About 40 fms. from shaft, a winze is now being sunk below this level on the continuation of a large cavern we have in this part of the mine, the depth of which is 12 fms. 3 ft., where the lode is about 3 ft. wide, carrying two very regular walls—it is composed of flookan and light spar, intermixed with particles of lead at times. The quantity of ground developed during the past 12 months in driving is 18 fms. 4 ft.; and in sinking, 37 fms. 5 ft.—making, together, 122 fms. 3 ft.

The resolutions passed will be found in our advertising columns.

CARADON WHEAL HOOPER MINING COMPANY.

At a general meeting of adventurers, held at the mine, on the 31st August, a call of 1*l.* per share was made; and the purser was directed to take the necessary steps to obtain the amount due from Mr. Martyn, the late purser—the shareholders will, therefore, see the necessity of paying their calls at once into the Devon and Cornwall Bank. The accounts presented showed the June costs as 95*l.* 1s. 9d.; and, for July, 179*l.* 18s. 5d. The unpaid calls amount to 509*l.*, the payment of which would enable the purser to liquidate all outstanding bills, and leave a balance in hand of 126*l.* 19s. 11d. The following report, from the captain, was presented:—"I am happy to say that our operations are progressing satisfactorily, and that the prospects were never so cheering as at present. The end, south-east on the caunter lode, is extended 13 fms. from the shaft; the ground is soft; the price for driving, 3*l.* 10s. per fm. We have about 6 fms. more to drive to cut Daw's, Dingle's, and Carpenter's lodes (which, in my former reports, I have given you to understand are likely to form one lode)—this is an object of no small importance. I have, of late, carefully surveyed the run of ore ground in this district, and find it to be south-east and north-west—this speaks much in favour of the position of Caradon Wheal Hooper. The cross-cut north is, at the 50 fms. put out from shaft towards Sawpit and Seymour's lodes, 9 fms. 3 ft.; the ground is a compact bed of granite, hard, but, as we have a small cross-course, it greatly facilitates our progress in driving. I wish you to understand that there is a promising lode gone down in the bottom of the 30 fm. before this end, which, when we reach there, will be 30 fms. back—24 fms. of this is granite; this lode and Seymour's will meet between the 30 and 40—here I confidently expect to find a good course of ore."

CUBERT SILVER-LEAD MINING COMPANY.

A general meeting of shareholders was held at the offices, George-yard, Lombard-street, on Tuesday, the 31st August,—THOMAS LEA, Esq., in the chair.—The statement of accounts for the four months ending July, was presented, showing, mine cost for April, 405*l.* 8s.; May, 444*l.* 2s. 1d.; June, 479*l.* 5s. 7d.; July, 448*l.* 15s. 10d; discount on ore bills, 22*l.* 16s. 7d.; balance from last account, 96*l.* 13s.—1800*l.* 8s. 1d. By sale of silver-lead ores, April and May, 698*l.* 9s.; June and July, 718*l.* 2s. 4d; call of 10s. per share, made 4th May, 250*l.*—leaving a balance against the mine of 230*l.* 9s. 9d. The accounts were received and passed, and a detailed report, from the mining captain, presented—which is not requisite here, from a regular report appearing among the Mining Correspondence. The report having been ordered to be entered on the minutes, a call of 1*l.* per share was made—10s. of which is payable forthwith, and 10s. on the 1st of November. The question of the working of the Mount Sett having been considered, it was resolved that a special general meeting be called, to give its working, or otherwise, the fullest consideration.

CALLESTOCK MOORS.—A meeting of adventurers took place at the Royal Hotel, Truro, on Tuesday last, when the following accounts were passed, and a call of 2*l.* per 256th share made for liquidating the balance, and for the further prosecution of the mine:—To balance at last account, 558*l.* 11s. 4d.; costs and merchants' bills for June and July, 757*l.* 17s. 7d.—1316*l.* 8s. 11d.—By call of 3*l.* per share (less arrears, 57*l.*), 711*l.*; arrears received since last meeting, 18*l.*; ores sold (less dues), 332*l.* 4s. 6d.—1061*l.* 4s. 6d.; leaving balance of 255*l.* 4s. 5d.

SOUTH WHEAL FRANCIS.—A meeting of adventurers was held on the mine on Monday last, when the accounts for June and July, as follows, were allowed, and a dividend of 12*l.* per share declared.—Balance at last account, 1372*l.* 8s. 1d.; ores sold, less dues, 3698*l.* 10s. 5d.—5070*l.* 18s. 6d.—To costs, &c., for June and July, 2355*l.* 18s. 11d.; dividend of 12*l.* per share, 1488*l.*—3743*l.* 18s. 11d.—balance in favour of adventurers, 1326*l.* 19s. 7d.

WHEAL LOVELL.—At a meeting of adventurers, held at the mine, on the 27th Aug., the accounts, of which the following is an abstract, were passed, and a call of 1*l.* 10s. made, for the further prosecution of the mine:—To balance at last meeting, 4594*l.* 8s. 5d.; costs for April, May, and June, 2922*l.* 3s. 10d.—7516*l.* 12s. 3d.—By arrears of fifth call, 150*l.*; materials sold, and sundries, 43*l.* 13s. 6d.; call of 1*l.* 10s. per share (less arrears, 82*l.* 10s.), 622*l.* 10s.; ores sold, 1491*l.* 13s. 2d.—2307*l.* 16s. 8d.—Balance against mine, 5208*l.* 15s. 7d.

WHEAL MARGARET.—At a general meeting of adventurers, held at Halsetown, on the 24th August, the following statement of accounts, to the end of June, was presented:—By tin sold, 4687*l.* 16s. 1d.; sundries, 89*l.* 7s. 6d.—4777*l.* 3s. 7d.—Labour cost and carriage, 1769*l.* 17s. 2d.; coals, 165*l.* 19s. 1d.; merchants' bills, rents, taxes, &c., 658*l.* 15s. 8d.; lord's dues, 189*l.* 12s. 7d.; new steam-whim, 200*l.*; erecting, &c. &c., 250*l.*—3234*l.* 4s. 6d.—showing profit of 1492*l.* 19s. 1d.; add balance in purser's hands, end March, 523*l.* 1s. 9d.—2016*l.* 0s. 10d. By dividend of 15*l.* per share, 1680*l.*—leaving a balance in the hands of the purser of 336*l.* 0s. 10d.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

BIRCH TOR.—This mine is looking better than it was before. There is a good lode in the 62 fm. level, and in the deep and shallow adit levels; there is also tin in the 74 fm. level east—but this is not yet as good as the 62, neither is it into the run of tin ground which the latter level has been driven through.

CONDURROW.—I cannot unravel the mystery in reference to the reaction you speak of in Condurrow shares, as I have this day visited the mine, and her prospects are much the same as for some time past, having a very valuable lode in the engine-shaft for tin, with large stones of grey ore. Four shares were sold on the mine on Thursday last, at 37*l.* 10s. each; and a gentleman, who is considered a good miner, and a person of some note in this neighbourhood, has recently bought not less than 12 shares, and to-day a mine agent has been underground there for him, and reports very cheeringly, and declares he would not sell for 50*l.* per share.

HERODSCOMBE.—The engine went to work on Tuesday, and works well.

HERODSFOOT.—I have this instant received a note from the captain, observing, "I am happy to inform you, that we have discovered a good lode in the 62 south end, about 2 fms. south of the slide; the lode is about 12 in. wide—worth about 16*l.* per fm., and seems to be improving as we go forth.—P.S. We intend to hoist the flag on Saturday next."

— They have a splendid lode in the 62 and 72 fm. levels south, and there is every prospect of the mine being in a position to pay dividends about Christmas; but the purser wants punctuality in convening his two-monthly meetings. They sampled this week 60 tons of rich silver-lead ores, and at Herodscombe 30 tons, which was raised in driving the adit level.

HOLMBUSH.—The 100 fm. level, and pitch over it, are still looking very well indeed, and I do think she will do well again by-and-bye. The pitch which they set at 4s. in the 1*l.* on the value of the lead, and the 90 end south, in the lead lode, are also looking very promising.

MARKE VALLEY.—The course of tin continues, and is worth 20 tons per fm., worth from 3*l.* to 4*l.* per ton.

The OLD VITIFER adit is likely now to be cleared with greater speed than it has been hitherto, in consequence of the ground being firmer as we go west, we have about 30 fms. more to clear to the engine-shaft, and I expect this will be done in about a month from this time. I have great hopes from this part of the mine, seeing, as I do, that the old men have taken away the lode even under water, from the bottom of the adit.

PLYMOUTH WHEAL YEOLAND.—The south lode, in the shaft, is upwards of 5 ft. wide, and is producing very good work for tin. The north lode, in the adit level, is about 2 ft. wide, all saving work, and has a very promising appearance, although not near so good as the south one yet; but I hope, as we get further east on the course of it, and parallel with our present workings on the south lode, this lode will improve. We are not doing anything to the copper lodes now, neither shall we, before we get to a greater depth, when we purpose driving out a cross-cut, to intersect them. We have broken very good stones of ore from them in the adit; but it is only a few fathoms from surface—therefore, too shallow to expect any profitable returns. This mine is, I think, likely to be a very good concern.

POLSAITH CONSOLS.—Captain Bishop was at the meeting held yesterday: he recommends the erection of a steam-engine of about 30-inch cylinder, as soon as a reasonably priced one can be procured; in the meantime, the winze will be sunk on the course of the lode, by the application of a good hand-pump, to the depth of 5 or 6 fms. The course of lead is represented as a most splendid one. An experienced agent informed me, that it is the finest he ever saw, with the exception of what he worked on in Old Shepherd's Mine, where it was 3 feet solid: he thinks it to be as good as any thing he ever saw in Wheal Trehane, but not so rich for silver. Other discoveries will shortly be made—that is my opinion—still it is very possible to err in mining matters.

WHEAL ASH.—The lode here, in the adit level, is upwards of 5 ft. wide, composed principally of mundic, with a little gossan and spar. I cannot but believe we shall have a good course of ore in a little time, after we begin to sink below the adit. I expect the shaft will be holed in a very short time now, as the water is nearly all gone out of it.

WHEAL CARTHEW.—Yesterday, I was at Wheal Carthew Mine, and find the lode is looking much better than I have ever seen it before; it is full 2 ft. wide, composed of an excellent soft gossan, with a little flookan. We are now driving at 1*l.* per fm. We drove last month 9 fms. 4 ft. If this lode continues to present the same appearance as it has the last 4 fms., the character of Carthew will soon rise.

WHEAL FRANCO.—The lode in the 32 fm. level, east from Spry's shaft, is a little improved, and has a promising appearance; the lode in the middle level, west from Burnal's shaft, is looking very well, and producing a fair quantity of ore. The rise in the back of the 10 fm. level is improved. The capels of the lode are now cut in the 47 fm. level; and the cross-cut will be commenced towards the lode sometime in next month. The pitches are looking as usual.

— There are important improvements in the 32 fm. and shallow levels during the last few days. The capel of the lode is cut in the 47 fm. level.

WHEAL MARY CONSOLS will rise very soon, for they have made two or three very important discoveries within the last fortnight.

WHEAL TREHANE is looking as well as ever, and ought to fetch 40*l.* or 50*l.* per share. The present underlie of the lode in Wheal Trelawney is only 5 in. per fm. They are busily engaged in fixing the flat-rods; and, by the arrangement effected with Trelawney, they will be able to return 10 tons of lead ore per month, in addition to their usual sampling.

TRENANCE MINE.—A very favourable report has just been received from the agent, accompanied by some extraordinary specimens of malleable copper. This mine is now attracting very considerable interest; and we shall give some further particulars in our next Journal.

NITHSDALE RAILWAY.—Operations are now in progress on this line in the vicinity of Dumfries. From Douievale to Racks village, which includes the crossing of Lochar and the adjacent moss, the works present a busy and animated scene. At Racks village, a cutting, through beds of sand and gravel, is completed to a considerable extent, which has been used to form the embankment running to the stream of Lochar. This embankment is of no great height, and the work is well advanced. Lochar is at present crossed by a temporary wooden bridge, and it is said the permanent one will be of the same material. At Noblehill, betwixt 20 and 30 men have opened the deep cutting necessary at that point. A considerable amount of materials has also been laid down here, including a large quantity of planking, waggons, and stones, for the accommodation bridge to be built over the road leading to Essex-park.

ITALIAN RAILWAYS.—On the 23d August, his Holiness was pleased to approve the undertaking for railways adopted in the Council of Ministers of the previous day. The lines whose formation is now resolved upon will be from Rome to the Neapolitan confines near Ceprano, and from Rome to Bologna, thence to the confines of Modena. The deliberating companies are two, one for each line, which will furnish to Government a double guarantee—the one amounting to 92,000, the other to 1,000,000 scudi, either in a consolidated fund or in ready money.

GREAT SCIENTIFIC MEETINGS.—The Annual Congress of Naturalists is about to meet at Venice. Count Giovanelli, President of the Venetian Society of Naturalists, has, it is said, disbursed 1,000,000 fr. in making the necessary preparations in his palace for the sittings. A great number of *savans*, from different parts of Europe, and upwards of 10,000 foreigners, have already arrived at Venice.

AMERICAN WAR STEAMERS.—By a late Act of Congress, four war steamers are directed to be built; two first-class, of 2414 tons burden, and two second-class, of 1379 tons. Dimensions of first-class: Between perpendiculars, 250 ft.; beam, extreme, 45 ft.; depth to gun-deck in hold, 26 ft. 6 in. Second-class: Between perpendiculars, 210 ft.; beam, extreme, 27 ft.; depth to gun-deck in hold, 23 ft. The two first-class steamers, and one of the second-class, to be propelled by side-wheels; the fourth by a screw-propeller. One of the largest class is to be built at Gosport, and one at Philadelphia; one of the second-class at New York, and one at Kittery, Maine.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Buddle's West Hartley 18—Charlotte Main 18 9—Chester Main 18—Davison's West Hartley 18—Dean's Primrose 17—Dipton Tanfield 16—Hasting's Hartley 18—Holywell Main 18 9—Ord's Redheugh 16 9—South Pearth 16 6—Tanfield Moor 18 9—Wylam 17 9—Wall's End Acorn Close 19 6—Rewicke and Co. 20—Brown's Gas 16—Clarke and Co. 18 6—Hotspur 19 3—Hedworth 18—Hilda 19 6—Northumberland 19 3—Wharncliffe 20—Eden Main 20—Belmont 20—Braddyll's Hetton 20 9—East Hetton 19 9—Haswell 21 3—Hetton 21—Lumley 19 6—Lambton 20 9—Russell's Hetton 20 9—Shotton 20 3—Stewart's 21—Whitwell 19 9—Hartlepool 20 9—Hudson's Hartlepool 20 6—High Thornley 19—Kelloe 20 6—Thornley 19 9—Adelaide 20 3—Brancepeth 16 6—Denison 19 3—Richardson's Tees 19 3—Tees 20 9—West Hetton 20—Derwentwater Hartley 17 6.—Ships at market, 133.

WEDNESDAY.—Davison's West Hartley 18—Dean's Primrose 16 9—Dipton Tanfield 15 9—Hasting's Hartley 18—Ord's Redheugh 16 9—South Pearth 16 6—Tanfield Moor 18 9—Townley 17 6—Wylam 18—Wall's End Acorn Close 20—Brown's Gas 16—Clarke and Co. 18 6—Gosforth 20 3—Hilda 20—Riddell's 20 3—Walker 20—Belmont 20 6—Crawford 19 6—Hetton 21 6—Lumley 20 3—Whitwell 20 3—Hudson's Hartlepool 20 9—Hough Hall 20 6—Brown's Deanery 20.—Ships at market, 30; sold, 36; unsold, 3.

FRIDAY.—Tanfield Moor 19—Wall's End Killingworth 21—Wharncliffe 21—Russell's Hetton 22—Hartlepool 22—Hudson's Hartlepool 21 3—Old Haigh Moor 19.—Ships at market, 12; sold, 19.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 195½ 7	Belgian Bonds, 4½ per Cent., 92½
3 per Cent. Reduced Ann., 87⅞ ½	Dutch, 2½ per Cent., 56 5⅛
3 per Cent. Consols Ann., 87⅞ 7	Brazilian, 5 per Cents., 85
3 per Cent. Annuities, —	Chilian, 6 per Cents., 90½ 1
3½ per Cent. Ann., 89½ 8½	Mexican, 5 per Cents., 19½
Long Annalities, 9½	Spanish, 5 per Cents., 20⅛
India Stock, 10½ per Cent., 239	Ditto 3 per Cents., 30½
3 per Cent. Consols for Acct., 87⅞ ½	Portuguese, 5 per Cents., 80
Exchequer Bills, 1000*l.* 3d., 4 7 4 pm.	Russian, 5 per Cents., 108½

MINES.—There has not been so much activity in the mining share market this week as during the last fortnight, still there has been a fair proportion of business done, and in course of completion. The inquiries are principally confined to dividend-paying mines, and such that are considered on the eve of becoming so—whilst advices of improvements have created a desire to purchase, before an advance of price has taken place. We find buyers of Carn Brea, South Basset, West Seton, East Wheal Rose, Treviskey and Barrier, and a few others; but we are not aware of many of these shares having changed hands.

In Condurrows, a reaction has taken place. Shares have changed hands at different quotations, nor can we say they are even firm at quoted prices; yet, from the county, we learn they are again advancing. Callingtons are still in demand; but we believe our present quotation is the highest price that has been obtained; sellers are scarce, and reluctant to part with them even at the price quoted.

Mendip Hills have been in demand during the week, and several large transactions have been effected;—they are still in request at an advanced price. The business in Trelawneys has been limited this week, and they appear to have given place to Trehanes and Herodsfoots, as a large number of shares have changed hands during the week. These shares are becoming especial favourites with many of their largest holders—each likely to become steady and good dividend-paying mines. It is anticipated that the next meeting of the former will give 2*l.* per share.

Several shares in Polsaith Consols (situate in the parish of St. Minver) have passed into new hands; and, from the discoveries lately taken place there, firm holders are likely to come in.

Shares in the following mines have been sold during the week—viz.: Callington, Treviskey and Barrier, Condurrow, Trehane, Holmbush, Herodsfoot, Herodscombe, East Crowndale, Polsaith Consols, Trelawney, Mendip Hills, Franco, Wheal Ash, Stray Park, South Trelawney, Treleigh, South Basset, West Basset, Andrew and Nangilea.

In foreign mine shares the transactions have been very limited, with the exception of a little business done in St. John del Reys, Mocaubas and Cocaes, United Mexicans, and Real del Montes; we know of no other *bonâ fide* transactions.

The *Great Western* steamer brought home despatches for the following mining companies—viz.: Anglo-Mexican, Bolanos, Pachuca, Real del Monte, United Mexican—copies or extracts from the reports will be seen in another column. The freight consisted of $208,391 on merchants' account, but none for dividends; 1981*l.* in gold; 591 ozs. of gold dust; 20 bars of silver; besides a valuable cargo of miscellaneous merchandise.

HULL, THURSDAY.—During the past week nothing particularly worthy of note has occurred in the share market. The continued drain occasioned by the calls, coupled with the recent large failures, have caused a decline in most stocks. The chief business during the week has been in Ipswich and Bury Extensions (late Cambridge and Ely scrip), which, owing to the favourable terms granted to them by the Eastern Union Company, have been largely dealt in.

GAS-LIGHT AND COKE COMPANIES.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
5,000	British (London)	£18	£1*	£18
5,000	Ditto (country)	19	1½*	24
1,000	City of London	100	10	300
1,000	Ditto New	100	10	300
4,000	Equitable	50	2½*	38
10,000	European	20	1½	18 19
12,000	Gas-Light and Coke Chartered Co.	50	6	60
6,000	Ditto New	10	6	12
9,000	General United Gas-Light Company	50	2	18
10,000	Imperial	50	6	80
48,400*l.*	Ditto Debentures	100	4	100
8,000	Imperial Continental	29½	4½*	61 63
7,000	Ditto New	28	4½*	61
54,500*l.*	Ditto Debentures	100	5	100 102
2,000	Independent	40	6	64
3,000	London	50	6	50 51
3,000	Ditto	50	5	50
9,000	Phœnix, or South London	43	5	33
1,000	Ratcliff	80	5	75
4,000	South Metropolitan	25	6	31½ 32½

MISCELLANEOUS COMPANIES.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
10,000	Assam Tea Company	£20	—	£ 3
1,080	Auction Mart	—	£ ½	26 28
10,000	Australian Agricultural	30	1	20 22
10,000	Australian Trust	38	—	36
8,000	British Alkali	25	4	16½ 16⅝
10,000	British American Land	35½	—	14
8,600	British Rock and Patent Salt	35	18	11
5,915	Canada	39½	8	35½ 36
—	City Bonds (Navigation)	—	3½	87
1,800	Corn Exchange	37½	14	26½
5,000	Droitwich Patent Salt	25	1*	11
2,700	Equitable Reversionary	95	4½	89
—	General Reversionary Interest	100	5	104 106
20,000	General Steam Navigation	14	1½*	23½
—	Hudson's Bay Stock	—	10	230 240
2,100	Hungerford Market	100	½	—
1,500	London Commercial Sale Rooms	—	1½	31 32
8,000	London Reversionary	22	—	23 24
500	Margate Pier	—	10	196
10,000	Mexican and South American	7	—	3½ 4
20,000	New Brunswick	75	—	—
11,600	Peninsular and Oriental Steam	50	7	88
6,600	Ditto	40	—	57½
5,287	Reversionary Interest Society	100	4½*	97
—	Royal Mail Steam	—	5½	54½ 55½
8,000	South Australian	25	6	—
20,000	Upper Canada	100	5	93 94
20,000	Ditto	—	5	93 94
10,000	Van Diemen's Land	20	—	3 4

* Those marked with an asterisk (*) are dividend per share.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	*Traffic Returns.*	
						1846
Arbroath and Forfar	15	£179,939	26½	3 p.c.	£260	£273
Chester and Birkenhead	15	658,293	39½	3½	844	791
Dublin and Drogheda	35	689,349	54	3½	980	953
Dublin and Kingstown	7¾	473,282	—	9	1318	1809
Dundee and Arbroath	16½	156,323	39	6	—	—
Dundee, Perth, and Aberdeen	47	285,745	35	6	—	351
East Lancashire	30½	2,207,490	17	—	1479	—
Eastern Counties	226	6,513,026	17½	7	12026	9638
Eastern Union	44	531,021	59	—	1087	425
Edinburgh and Glasgow	48	2,375,435	57	6	4246	4489
Glasgow, Paisley, and Ayr	60½	1,567,281	121	7	2911	2907
Glasgow, Paisley, & Greenock	23	835,918	18½	2	1407	1217
Gt. Southern & Western, Ireland	110½	1,343,718	30	—	1715	—
Great Western	241	9,714,939	106	8	21522	21940
Kendal and Windermere	10½	147,001	24½	—	243	—
Lancaster and Carlisle	70	1,209,913	89	—	1499	—
London and North Western	382	18,042,004	165	10	47927	47099
London and Blackwall	—	1,103,717	6	1½	1263	1491
London, Brighton, & South Coast	137½	5,109,667	47⅞	7	11667	10697
London and South-Western	186½	5,835,122	60	9	10902	8600
Londonderry and Enniskillen	14½	—	24½	—	126	—
Manchester & Leeds	147½	5,035,291	95½	5½	—	8334
Manchester, Sheffield, & Lincolnsh.	49½	1,678,108	39	5	2485	2036
Maryport and Carlisle	29	414,295	—	—	629	624
Midland Company	871	7,962,274	110½	7	24063	21078
Newcastle and Carlisle	65	1,184,000	118	9	2511	2147
Norfolk	70½	1,199,600	168	7	2404	1706
North British	78	1,450,958	38½	—	2930	3014
Shrewsbury and Chester	17	591,158	21½	—	544	—
South Devon	29	1,061,233	35	5	1198	567
South-Eastern	157½	5,898,411	33½	3½	12383	12059
Taff Vale	38	988,411	—	6½	1710	1326
Ulster	25	256,353	52	5½	800	692
Whitehaven Junction	12	91,374	—	—	208	—
York, Newcastle, & Berwick	128½	3,583,109	34½	9	13733	7787
York and North Midland	182½	2,484,256	78	10	9474	7737

Total earnings for last week, £204,902, being an increase of £29,908 over last year.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Sept. 4, was 16,327; amount of money, £69 0s. 7d.

LATEST CURRENT PRICES OF METALS.

LONDON, SEPTEMBER 10, 1847.

	£	s.	£	s.	d.
IRON—Bar a. Wales...*ton*	0	0—	6	15	0
,, ..London ..	0	0—	9	15	0
Nail rods ,, ...	0	0—10	15	0	
Hoop(Staf.) ,, ...	0	0—12	0	0	
Sheet ,, ...	0	0—13	0	0	
Bars ,, ,, ...	0	0—11	5	0	
Welsh cold-blast foundry pig ..	4	10—	5	5	0
Scotch pig b, Clyde	3	6—	3	8	0
Rails, average	8	10—	9	0	0
Chairs	5	15—	6	0	0
Russian, CCND c..	0	0—	——		
,, PSI ...	0	0—	——		
,, Gourieff	0	0—	——		
,, Archangel	0	0—13	10	0	
Swedish d, on the spot	11	5—11	10	0	
,, Steel, fagt.	0	0—16	5	0	
,, ,, kegs e	14	15—15	0	0	
COPPER—Tile *f*	0	0—97	0	0	
Tough cake	0	0—98	0	0	
Best selected	0	0 101	0	0	
Ordin. sheets, *h*...	0	0— 0	0	11	

	£	s.	£	s.	d.
COPPER—Ord. bottoms ..	0	0—	0	0	12
YELLOW METAL See STRIPING	0	0—	0	0	9½
TIN—Com. blocks *g*...*cwt.*	0	0—	4	5	0
,, bars	0	0—	4	6	0
Refined	0	0—	4	10	0
Straits *h*	0	0—	4	2	0
Banca	0	0—	4	4	0
TIN-PLATES—Ch., IC *i*, *box*	1	8—	1	10	0
,, IX ...	1	14—	1	16	0
Coke, IC	0	0—	1	5	0
,, IX	0	0—	1	11	0
LEAD—Sheet *k* .....*ton*	0	0—19	10	0	
Pig, refined	0	0—20	5	0	
,, common	0	0—18	10	0	
,, Spanish, in bd.	0	0—18	0	0	
Red.....	0	0—19	10	0	
Dry White.....	0	0—24	0	0	
Shot (Patent).....	0	0—21	0	0	
SPELTER—(Cake) *l* on spot	18	15—19	0	0	
,, ,, for arrival	0	0—19	0	0	
ZINC—(Sheet) *m* export.*	0	0— 27	0	0	
QUICKSILVER *n* .....*lb.*	0	0— 0	4	6	

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto
e In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash
in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash.
m Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

IRON.—The demand for Welsh and Staffordshire continues good, particularly for Welsh, all the makers being full of orders; in Foreign, no recent sales.

TIN.—Both English and Foreign are in fair request, and sales of each have been made this week at quotations.

SPELTER continues dull, but there are a few orders in the market at about 5*s.* under our lowest quoted price; other metals are firm as to prices, which remain as per last week's *Mining Journal*, without much doing.

GLASGOW PIG-IRON TRADE, SEPT. 9.—The recent heavy failures in this city have had their effect on the pig-iron market. Yesterday mixed Nos., to some extent, was forced on the market, for immediate cash, and brought 67*s.* per ton; to-day there is nothing doing—price nominally 67*s.* to 67*s.* 6*d.*

THE IRON TRADE.—The following is extracted from a communication, dated Birmingham, September 6:—"We are now something like two-thirds through the quarter, and it is pleasurable to be enabled to report the continual satisfactory condition of the iron trade; the demand is steady without being excessive, and prices are, of a necessary consequence, firm. The trade is just now in that peculiar condition, that we have reason to believe it will be found we are correct in saying, that for months to come there will be no change whatever worth notice. Speculation in iron is almost out of the question in present circumstances; it is scarcely possible to conceive any person unwary enough to speculate—and this will, as much as anything, tend to ensure steadiness of prices. Notwithstanding the praiseworthy caution of railway boards in proceeding with the construction of their new lines, the advertisements for contracts for rails, which are daily appearing in the newspapers, are sufficiently indicative that for a long time the demand will be steady. Reports have recently appeared in several of the London diurnals, copied from a provincial contemporary, which are calculated in some particulars to create alarm without any grounds for such apprehension. It has been set forth that there is a "mania for increasing the quantities of iron produced;" for "extensive additions and enlargements at works;" for "increasing the means of smelting and manufacturing;" and for "extracting from old pits, long since abandoned, any remnants of coal or ironstone;" the bugbear conjured up as a result is "over production;" "large useless erections;" "heavy incumbrances," &c., so soon as the amount of consumption returns to its natural limit. Now, to those acquainted with the actual state of trade, and its future prospects, nothing can be more fallacious than these deductions, which are seemingly cast up only for the sake of checking industry and enterprise. There is no probability that, until a considerable period of time has elapsed, the amount of consumption will have returned to its natural limits; and, having in mind the serious drawback which the existing high price of iron has upon those trades where the goods manufactured are mostly for export, it is surely no very visionary measure to seek to increase so far the production of the commodity that these may be in some measure relieved; having in view, too, the fact, that the present price of iron is such as to allow of a very considerable margin for reduction, still producing a large profit to the maker. Perhaps scarcely so many words were essential to convince the initiated of the ridiculous character of the argument, that no attempt must be made to increase production, lest the price of bar-iron should be reduced from upwards of 10*l.* per ton. The demand from abroad continues as steady as for the home consumption; and it may be worth while to announce that the contractors for iron-wire to the Electric Telegraph Company have recently received orders for many hundreds of tons of their material, and that there is a prospect of a very large quantity being required for this new purpose for some time to come. In short, from all the information we have been able to glean on the subject, the trade is in as flourishing a condition as could be desired."

PRICES OF METALS IN AMERICA.

NEW YORK, AUGUST 14, 1847.

		$ cts.	$ cts.
COPPER—Sheathing ....*lb.*	0	23½ —	0 0
,, Old	0	18½ —	0 19
,, Braziers'	0	24 —	0 25
,, Pig	0	18 —	0 0
,, Bolts	0	24 —	0 25
LEAD*—Pig	0	0 —	4 10
,, Bar	0	5 —	0 5½
,, Sheet	0	5½ —	0 0
IRON—Pig, Eng. & Scotch...	0	0 —30	0
,, ,, American, No. 1	0	0 —32	50
,, ,, common	0	0 —27	00
,, Bar, RPSI	100	0 102	5
,, ,, Swedish	0	0 —87	50
,, ,, American, old..85	0	— 0	0
,, English refined 85	0	— 0	0
,, ,, common .72	50	—75	0
,, Sh. Russian, 1st qual.	0	11½ —	0 12

	$ cts.	$ cts.
IRON—Engl. & American..	0 5½ —	0 6
,, Hoops do.....*cwt.*	5 50 —	6 50
NAILS—Cut 4 da. 40 ....*lb.*	0 4½ —	0 4½
(3d 1 c. & 2d 2 c. more)		
,, Wrought, 6 to 20....	0 10 —	0 14
,, Horse-shoe	0 17 —	0 21
SHOT—Patent	0 8½ —	0 0
,, Buck	0 6½ —	0 0
SPELTER—In plates	5½ 6 —	0 0
STEEL—German.....*lb.*	0 10½ —	8 13
,, English Hoop L....	0 13 —	0 13½
,, Spring	0 5½ —	0 5½
,, Trieste .....*boxes*	0 0 —	0 0
,, American	0 4½ —	0 5
TIN—Block, South Amer.*lb.*	0 0 —	0 0
,, Ditto, East India	0 0 —	0 0
,, In plates, ½ dx. bx. ..	9 0 —	9 25

* Duty—Pig and bar, 3; old and scrap, 1½; sheet, 4 cts. per lb.

EXPORTS OF METALS TO ALL INDIA FROM LONDON AND LIVERPOOL,

FOR THE FIRST EIGHT MONTHS OF 1846 AND 1847.

Metals.	1846.	1847.	*In.* or *De.* in 1847.
Spelter .....*Tons*	4442	1868	2574
Copper	2365	2612	257 —
Iron, British	6777	7884	1107 —
Ditto, foreign.....	2935	652	— 2283
Tin-plates .....*Boxes*	4963	6495	1532 —
Lead .....*Tons*	196	651	455 —
Steel	488	505	17 —
Quicksilver.....*Bottles*	755	—	— 755

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver coin to Mauritius	£1000
Gold coin to ditto	1000

NEW PATENTS.

W. Gibbons, Corbyn's Hall, Worcester, for improvements in trussing beams and girders.

J. Sims, C.E., Redruth, Cornwall, for certain improvements in steam-engines.

J. C. Robertson, C.E., Fleet-street, London, for certain improvements in the manufacture of metals from their ores.

J. M. Rose, of the firm of Rudall and Rose, Tavistock-street, Covent-garden, musical instrument makers, for certain improvements in flutes, clarionets, and other similar wind instruments. (Being a communication.)

Henry Vint, gent., St. Mary's Lodge, Colchester, for improvements in propelling ships and other vessels.

J. B. G. Ferryman, gent., Cheltenham, for certain improvements in handles to be applied to various articles for containing liquids, or other matters liable to be spilt.

T. Marsden, Salford, Lancaster, for improvements in machinery for dressing or combing wool, flax, and other fibrous substances.

W. Brockedon, Devonshire-street, Queen-square, Middlesex, gent., for improvements in heating rooms or apartments.

C. W. O'Leary, Tralee, Kerry, Ireland, for certain improvements in the methods of producing power for the discharge of weapons and missels, and other purposes.

T. Battye, Woburn-place, Middlesex, gentleman, for an improved mode of retaining the waist of the human body in a desirable form, without producing the inconvenience resulting from too tight lacing of stays or corsets, or buckling of belts, waistbands, or girdles.

C. A. Kurtz, Manchester, manufacturing chemist, for certain improvements in the mode of preparing and using indigo in the dyeing and printing of woollens, cottons, and other fabrics.

J. Blyth and A. Blyth, Saint Arms, Limehouse, Middlesex, and J. M'Culloch, Masemore Cottages, Old Kent Road, Surrey, for certain improvements in apparatus for distilling and rectifying.

F. Steiner, Hyndburn Cottage, near Accrington, Lancaster, for improvements in the manufacture of sugar. (Being a communication.)

J. Pitt, Cheyne-walk, Chelsea, for improvements in apparatus for holding down trousers.

J. Leadbetter, Over Darwin, Lancaster, brazier, and W. Pierce, of the same place, mechanic, for certain improvements in machinery, or apparatus, for raising water and other fluids.—*Mechanics' Magazine.*

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shewn of great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1838, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1*s.* each, but to customers gratis.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7 ..	12
512	Albert Consols.....	1 ..	2½
1024	Alfred Consols	4½ ..	30
256	Alternum Consols.	2 ..	12
235	Andrew and Nangilos	25½ ..	12
10000	Ayrshire Iron Company	5 ..	4½
1624	Balleswidden	9 ..	18
128	Balnoon Consols.....	25 ..	25
10000	Banwen Iron Co.....	2 ..	—
1000	Barristown	4½ ..	10
4000	Bedford	2½ ..	3½–4½
128	Besore Lead Mine.....	14 ..	10
315	Birch Tor Tin Mine....	34½ ..	5
8000	Blaenavon	50 ..	20
100	Botallack	175 ..	140
120	Brewer	5 ..	7
10000	British Iron, New, regis.	10 ..	15½
—	Ditto ditto, scrip.....	10 ..	19
128	Budnick Consols	52½ ..	40
128	Burthy	20 ..	21
100	Bwich Cwmerfin	20 ..	—
128	Callestock	17 ..	30
1000	Callington	19 ..	45
256	Caradon Copper Mine	9½ ..	1
256	Caradon Mines	32½ ..	17
256	Caradon United	24 ..	10
256	Caradon Wh. Hooper..	20 ..	4
1000	Carn Brea	15 ..	102½
2048	Carmarthen Consols ..	2 ..	3
2048	Cascade.....	1 ..	1½
112	Charlestown	200 ..	100
166	Cleveland.....	9 ..	5
512	Costlithe Hill	½ ..	1–1½
1900	Combmartin	7½ ..	3
500	Comblawn	5 ..	4½
128	Comfort	45 ..	100
256	Condurrow	20 ..	33–35
2560	Cook's Kitchen	14 ..	5½
1600	Coombe Valley Quarry	1½ ..	2
1000	Copper Bottom	1 ..	5
1024	Cosheen	4½ ..	20
240	Craddock Moor	15½ ..	15
128	Creeg Braws	120 ..	100
500	Cubert Mine	19½ ..	17½
2048	Dartmoor Consols	2 ..	4
7100	Derwent	8½ ..	5
1024	Devon & Courtenay Con.	6 ..	2
1024	Devon Great Consols..	1 ..	250
1000	Dhurode	2 ..	5
186	Dolcoath	30 ..	50
2560	Drake Walls	4 ..	4
10000	Durham County Coal..	45 ..	2
256	East Alvenney	6 ..	26
112	East Caradon	42 ..	42
2048	East Crowndale	4½ ..	3½
512	East Combe Silver-Lead	6½ ..	6½
128	East Pool.....	5 ..	50
100	East Relistian	22 ..	40
9000	East Tamar Consols ..	1½ ..	2
—	East Wheal Albert....	1 ..	3
94	East Wheal Crofty....	280 ..	125
256	East Wheal Fortune ..	2 ..	3
128	East Wheal Rose	50 ..	1300
2048	East Wh. Rough Tor ..	½ ..	2
—	East of Scotland Iron Co.	2½ ..	1½
123	East Wheal Seton	14 ..	20
256	Elborough	1½ ..	2
256	Exmoor Wh. Eliza....	3½ ..	10
512	Fowey Consols	40 ..	45
6400	Gadair	2 ..	2
20000	Galvanised Iron Co. ..	10 ..	9½
10000	Gen. Mining Co. for Irel.	2 ..	1½
2048	Georgia Tin Mines	1½ ..	1½
256	Gonsmena	31½ ..	70
128	Goonvres	4 ..	1½
244½	Grambler & St. Aubyn — .	12	
100	Great Consols	1000 ..	400
256	Great Callestick Moors	22 ..	25
2560	Great Michell Consols	1½ ..	3
256	Great Resugga Moor ..	3 ..	3½
512	Gt. Wh. Rough Tor Con.	6½ ..	30
1800	Great South Tolgus....	2 ..	2
100	Grogwinion	5 ..	—
1000	Gunnis Lake	1½ ..	3
256	Gwinear Consols.....	5 ..	15
1000	Harrowbarrow Old Mine	8½ ..	2
6000	Heigneton Down Con..	½ ..	2½
256	Herodscombe	2½ ..	10½
256	Herodsfoot	14 ..	21
10000	Hibernian	12½ ..	1½
239	Hobb's Hill	6 ..	5
1000	Holinbush	19 ..	11
827	Kirkcudbrightshire....	5½ ..	7
2048	Lamberroo Wh. Maria	10 ..	3
2048	Lanivet Consols	4 ..	2½
128	Lelant Consols	90 ..	60
160	Levant	— ..	90
1000	Lewis	15 ..	6½
1000	Llwyn Malees	5 ..	—
3600	Llynvi Iron	50 ..	60–65
256	Lostwithiel Consols...	12 ..	12
128	Ludcott	3 ..	3
6000	Marke Valley	10 ..	3
5000	Mendip Hills	2½ ..	1½
5000	Merionethshire Slate & Slate Slab Co...	1½ ..	2½–2½
20000	Mining Co. of Ireland	7 ..	8
256	New East Crowndale..	3½ ..	3½
128	North Fowey Consols..	30 ..	30
100	North Pool	45 ..	370
70	North Roskear	10½ ..	350
512	North Treburget	2 ..	3
100	North United	72 ..	15
256	North Wh. Abraham ..	½ ..	12
262	North Wh. Leisure ..	1½ ..	3½
128	North Wh. Providence	2½ ..	8
18000	Northern Coal Co....	23 ..	2
1207	Old Delabole Slate Co.	25 ..	50
128	Par Consols.....	200 ..	1000
256	Penhallow Moor	15 ..	4
4000	Pennant	1½ ..	1½
100	Penriliw	30 ..	65
128	Pen-y-Cefn Mine	50 ..	55
1280	Perran St. George Un.	13 ..	20
128	Perran Wh. Virgin...	9½ ..	15
512	Plymouth Wh. Yeoland	4½ ..	16
256	Polsaith Consols.....	3 ..	3
112	Providence Mines	35 ..	45
256	Redruth Consols.....	3 ..	2
10000	Rhymney Iron.....	50 ..	30
10000	Ditto New	7 ..	6½
256	Rose Consols	10 ..	2
1000	Rosewall Hill	1 ..	5
256	Rosewarva Mines	— ..	12
—	Shotts Iron Company..	50 ..	65
2500	Silver Valley	5 ..	2
1024	South Caillington.....	5 ..	5
128	South Caradon	10 ..	450

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
2000	South Dolcoath	2 ..	1
256	South. Friendsh. Wh. Ann	16 ..	25
200	South Harvannah	10 ..	25
9000	South Tamar	½ ..	½
256	South Tolgus	2½ ..	25
800	South Towan	10 ..	1½
256	South Trelawney	15½ ..	7
128	South Yeoland	16½ ..	20
128	South Wheal Basset ..	110 ..	70
124	South Wh. Francis....	160 ..	210
256	South Wh. Hope	— ..	5
1000	South Wh. Maria	2½ ..	2½
256	South Wheal Rose....	11½ ..	1
10000	Southern & Western, Irish	2 ..	4–5
280	Spearne Moor	30 ..	40
256	St. Austell Consols....	9 ..	10
94	St. Ives Consols	— ..	320
128	St. Michael Penkivel ..	5 ..	10½
1000	Stray Park	43 ..	27
9600	Tamar Consols	5 ..	5½
1024	Tavy Consols	3½ ..	4
6000	Tincroft	7 ..	8
1000	Tin Vale Consols.....	2 ..	2½
256	Ting Tang	15 ..	10
128	Tokenbury	143½ ..	10
256	Trehane	2 ..	25–27
5000	Treleigh Consols.....	6 ..	4½
2000	Trenance	2 ..	20
96	Tresavean	10 ..	250
120	Trethellan	5 ..	16
120	Treviskey and Barrier	130 ..	135
288	Trevean	½ ..	10
256	Trewollack	20 ..	4
128	Trewellard	12 ..	26½
100	United Mines	300 ..	350
256	Wellington Mines	15 ..	30
128	West Basset.....	45 ..	22
256	West Caradon	20 ..	168
128	West Cargoll	2 ..	12
512	West Fowey Consols ..	40 ..	15
256	West Grambler	7 ..	8
256	West Providence.....	1 ..	17
200	West Seton.....	40 ..	110
—	West of Scotland Iron Co.	210 ..	212
120	West Trethellan	5 ..	35
256	West United Hills	2½ ..	4
256	West Wh. Friendship..	7½ ..	3
3845	West Wheal Jewel....	11 ..	1½
2560	West Wh. Maria.....	2½ ..	1
2560	West Wheal Rough Tor	½ ..	2
256	West Wheal Shepherd.	5 ..	2½
256	West Wheal Tolgus ..	2½ ..	2
256	West Wheal Treasury	19 ..	10
5200	Wicklow Copper.....	5 ..	12
184	Wheal Adams	41 ..	10
1000	Wheal Agar.....	— ..	10
256	Wheal Albert	10 ..	8
128	Wheal Acland.....	13 ..	2
256	Wheal Allen	2 ..	5
237	Wheal Anderton.....	16½ ..	26
128	Wheal Ann	— ..	50½
512	Wheal Ann, Bridford..	1 ..	2
512	Wheal Anna Maria....	— ..	5
128	Wheal Arrose	3½ ..	5
1024	Wheal Ash	3 ..	12
120	Wheal Bal	5½ ..	20
2560	Wheal Barbara	1½ ..	4–4½–5
256	Wheal Benny	6½ ..	3
256	Wheal Blencowe	8 ..	5
256	Wheal Bucketts	20 ..	18
256	Wheal Byon Consols...	½ ..	½
256	Wheal Calstock	3 ..	4
136	Wheal Clifford	190 ..	190
128	Wheal Courtenay	— ..	20
6000	Wheal Curtis	2 ..	2–2½
256	Wheal Dyke.....	12 ..	13
256	Wheal Foriescue	5½ ..	8
512	Wheal Fortune Consols	3½ ..	6½
2048	Wheal Frederick.....	2 ..	2
388	Wheal Franco	27 ..	35
1024	Wheal Grace	3 ..	2½
128	Wheal Harriet.....	45 ..	50
256	Wheal Jane.....	21 ..	15
256	Wheal Louisa.....	2 ..	8
112	Wheal Margaret	79 ..	250
256	Wheal Maria (Hayle)	24 ..	10
4000	Wheal Martina Consols.	5 ..	2
512	Wheal Mary Ann	5 ..	20
256	Wheal Mary Consols..	38 ..	25
256	Wheal Mary (Lanivet)	6½ ..	4
256	Wheal Maude.....	1½ ..	1½
210	Wheal Prospect	4 ..	7
120	Wheal Reeth	27 ..	30
128	Wheal Rose.....	60 ..	45
2048	Wheal Samson	— ..	20
99	Wheal Seton	214 ..	1100
256	Wheal Sisters	29½ ..	35
256	Wheal Sc. his	3½ ..	10
128	Wheal Spearne	10 ..	75
128	Wheal St. Ann	9 ..	15
260	Wheal Trelawney	7½ ..	102
256	Wh. Tremaine (St. Ervan)	1½ ..	20
256	Wheal Tremayne	35 ..	25
128	Wheal Trew	20 ..	21
256	Wheal Trevenna	3 ..	4
92	Wheal Tryphena.....	140 ..	265
128	Wheal Venland	12½ ..	10
256	Wheal Vlow (Perranz.)	½ ..	½
184	Wheal Vyvyan.....	— ..	60
256	Wheal Williams	6 ..	18

FOREIGN MINES.

8000	Alten Mining Company	1½ ..	3½
15000	Asturian Mining Co. ..	10 ..	7
20000	Australian	2 ..	3½–4
10000	Anglo-Mexican Co....	100 ..	2
12374	Ditto Subscription	25 ..	2½
3000	Bolanos	150 ..	6½
2000	Ditto Scrip	15 ..	6½
15000	Brazilian Imperial	22 ..	7
10000	Cobre Copper Co.	40 ..	18
8500	Colombian Co. regis...	55	
5000	Ditto Scrip	5½	1
5000	Copiapo Mining Co....	14 ..	3
10000	General Mining Ass'n.	20 ..	15½
5000	Kinzigthal Mining Ass.	2 ..	2½
20051	Mexican Company	59 ..	—
2000	Mexican & South Amer.	7 ..	3
5000	Mosanbas & Cocaes	25 ..	4–6
29320	{ Rl. del Monte, regis. / Ditto unregistered }	28½ ..	av. 2
	Ditto Red Debentures	— ..	20
	Ditto Black ditto	— ..	14
	Ditto Loan Notes	150 ..	97½
7800	Royal Santiago	10 ..	5
2000	Pachuca Mines	4 ..	4½
11000	St. John del Rey	15 ..	5½–6–7
13174	United Mexican	28½ ..	2

SOUTH AUSTRALIAN SHARE MARKET.

Shares.	Company.	Paid.	Price.
2000	Adelaide	5 ..	7½
6000	Barossa Range	½ ..	3
2464	Burra Burra.....	5 ..	110
436	Grand Junction	15 ..	28
200	Greenock Creek	5 ..	12
100000	Scottish Invest. Co....	1 ..	1½
500	Wakefield	2 ..	3

Shares.	Company.	Paid.	Price
18	South Para	15 ..	50
1000	Poonawurta	— ..	9½–10
400	Princess Royal.....	34 ..	259
10000	Royal Mining Company	½ ..	1½
16000	Royal South Australian	— ..	55½
600	Victoria.....	2 ..	3

SOUTH AUSTRALIA AND NEW ZEALAND.

100000	North British Australasian (Kaw-aw, &c.)	1 ..	½–1

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

JOINT-STOCK BANKS.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
22,500	Australasia	£40	£3	£17½ 19½
20,000	British North American	50	5	45
20,000	Colonial	25	5	15½ 16
—	Commercial of London.....	20	6	22 23
4,000	Ionian State	25	6	24½ 25
60,000	London Joint-Stock	10	6	16
30,000	London and Westminster	20	6	27
40,000	National Provincial of England	35	5	35
20,000	National of Ireland.....	22½	5	19 19½
20,000	Provincial of Ireland	35	5	44½
4,000	Ditto New	10	8	19½
20,000	Union of Australia	25	6	24 25
10,000	Ditto' New.....	2½	6	24 25
60,000	Union of London.....	10	5	13½

MEETINGS OF PUBLIC COMPANIES DURING THE WEEK.

THIS DAY.....Belgian Eastern Junction Railway—London Tavern, Twelve for One.
MONDAY.....Wheal Trevenna Mining Company—Fountain Inn, Liskeard, at One.
TUESDAY.....Kirkcudbrightshire Mining Company—offices.
Irish Waste Land Improvement Society—King's Head, Poultry, at One.
WEDNESDAY...Wheal Fortescue Mining Company—Mining Office, Tavistock, at Three.
FRIDAY.....South-Eastern and Continental Steam-Packet Company—London Bridge-house Hotel, at One.——Commercial Dock Company—offices, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

PATENT GALVANISED IRON COMPANY.—Notice is hereby given, that an EXTRAORDINARY and HALF-YEARLY GENERAL MEETING of this company will be HELD at the London Tavern, Bishopsgate-street, at One o'clock precisely, on Monday, the 4th day of October next, when the report of the directors, and of the joint-committee of directors and shareholders, together with the accounts for the half-year ending the 30th day of June last, will be submitted.

It is also intended at such meeting to supply the vacancies which may then exist in the board of direction.

And at the same meeting, certain resolutions, having for their object the forfeiture of all shares on which calls shall be then due (excepting only the 4593 shares hereinafter alluded to), will be submitted to the shareholders for their confirmation.

And the said meeting will also be made special, for the purpose of considering the propriety of authorising the directors to make a further call on the new capital of the company created on the 28th October, 1845 (excepting only on the 4593 shares hereinafter alluded to), as also for the raising of such additional capital, by the issue of preference shares, as may be then agreed on.

And this meeting will also be made special, for the purpose of reconsidering the allotment, and otherwise disposing of the 4593 shares issued in conformity with the resolutions of the general meeting held on the 20th October, 1846, and for taking power to raise money on the debenture, or in such other manner as may be deemed advisable.

By order of the board, S. VINCENT, Secretary.
3, Manston-house-place, London, September 10, 1847.

LEAD ORES.

Mines.	*Tons.*	*Amount.*	*Purchasers.*
Sold in London.			
Wheal Adams	30	£10 6 6	Tamar Smelting Co.
Sold on the Mine.			
East Wheal Rose	104	£12 16 0	Michell & Sons.
ditto	102	13 16 6	ditto
ditto	75	11 17 6	ditto
Sold at Holywell.			
Newtonards.....	60 ..

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed— To the Editor,
Mining Journal Office,
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

Extracting Copper from its Ores by Electricity.—"A Subscriber" (Carmarthen), "M. W. B." (Foldice), "A Constant Reader" (Leek).—The earliest information respecting the progress of this invention will be given in our columns.

"T. K."—E. N. Fourdrinier, Esq., Cheddleton, near Leek.

"J. M."—The matter rests with our City Correspondent—to whom the letter has been forwarded.

"A Friend" (West Bromwich).—We cannot notice the unhappy disputes among the owners of the District Steel-Works, Smethwick—the existence of which must not only be subversive of all happiness between the parties, but prove ruinous to their business. The true part of "A Friend" would be to endeavour to effect an amicable settlement of the dissension, rather than to provoke, by extending a knowledge of its existence.

"A Subscriber" (Kensington).—We cannot advise respecting the value of the shares, or the prospects of the mine—application should be made to some respectable mine agent—see our first page.

"A Constant Reader" (Cornhill).—The communication never reached us, or it would have been readily attended to—will he favour us with another copy?

"Ajax" had better apply to Mr. Wyld himself, respecting his *Atlas of the World*. We have not seen any of the late numbers, and, therefore, cannot say how it proceeds—the first parts promised well.

"M. B."—A specimen of Mr. Thorneycroft's new rail can be seen at our office; but applications respecting its use, &c., must be addressed to Mr. T., Shrubbery Iron-Works, Wolverhampton—it was described in our Journal of the 12th June.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, SEPTEMBER 11, 1847.

The Indian Railway, to be constructed above and below Mirzapore (the shares of which are guaranteed by the East India Company at 5 per cent. for 25 years, the land being granted by the said company free of all charge, on the condition of the line reverting to the Government at the end of 99 years), is to be commenced immediately on the arrival in India of Mr. Macdonald Stephenson, who leaves England to-day. Mr. Brees and Mr. Adams accompany Mr. Stephenson, to act as commissioners in the management of the line, with five efficient surveyors and engineers. On the arrival of Mr. Stephenson and his assistants, they will be put in possession of the necessary land.

The favourable opinion entertained of the Indian Railway by the journal unfriendly to the mass of other railway undertakings has, of late, been frequently expressed; and the comparative benefit to be derived from a transfer of property in consols to an investment in the Indian railway (as above guaranteed), is demonstrated in the City article of yesterday.

As connected with the mining industry of England, we have no interest to advocate but that which relates to the metal that is indispensably necessary to put every mile of railway to be constructed into work; and we hail the above undertaking as one to essentially enhance the demand for iron, at a period when the 6500 miles of railway—on which, in round numbers, 250,000 men are now daily employed in England and Scotland—will be requiring the iron to make these lines, what they profess to be, *railways*. At present, the land is purchased, the excavations in daily progress; *but only a very small part of the iron to be purchased for these* 6500 *miles of railway is, to this time, secured by the respective companies.* This is readily explained, when the previous heavy and daily necessary disbursements are considered; and *the last money to be expended will be that to purchase the material, without which not a yard of railway can be put into operation.*

In Number 581 of this Journal, we inserted:—"It has been satisfactorily ascertained, that railways are in the aggregate composed of 4 rails, of 70 lbs. per yard each; 4 chairs of 20 lbs. ditto; 8 pins, of 8 lbs. ditto; crossings, 14 lbs. ditto—together 112 lbs. each rail, or 4 cwts. per yard; being for the 4 rails, &c., equal to 352 tons per mile. To these is to be added the stations, covered with iron roofings, turntables, and extra rails at stations; which, with the waggons, engines, and tenders, the iron girders used for bridges, and culverts for draining, tanks, &c., it will be found that a mile of railway will require at, or near, 700 tons of malleable and cast-iron—equal to about 820 tons of pig-iron."

At 820 tons in pig-iron per mile, 6500 miles of railway, now constructing, as above stated, requires, for all purposes, 5,330,000 tons of pig-iron

The respective companies will best know how much iron they have secured for their railways, and should now consider in how far the increasing ordinary demands for home and foreign consumption of manufactured iron (which so nearly approximates to the entire make in Wales, Staffordshire, and Scotland, taken at about 2,000,000 tons per annum) will enable the ironmasters to engage in extensive contracts to meet the requirements in railway purchases, with any safety to themselves, at the present range of prices.

If the price of iron is according to the rule which regulates the value of an article to be determined by the demand for it, *the effect upon iron may be important*, seeing the greatly reduced prices at this time, compared with the period when the Birmingham and Great Western Railways were constructing, and allowing for the increased make of iron since that period to confront with such immense requirements to be supplied for the completion of the *bonâ fide* works, daily advancing to the time when the interest of the shareholders must materially suffer, if the railways cannot be set in motion for want of the numerous adjuncts to be made from pig-iron herein enumerated.

It seems to us that, throughout the discussion on the policy of removing or continuing the duties at present leviable on the importation of foreign copper ores, the advocates of the latter alternative have wilfully cramped their observations, by what is called reasoning within a circle. We must suggest to them, that the tight tether by which their remarks are tied down must be loosed and enlarged, if they would fairly meet the question, or openly take the bull by the horns. Their local and sectional view of the proposition will not afford light enough for the elucidation of one-half its issues. Before they can give an adequate breadth to the field of their observations, they must see that the protection which they claim is, like the late Spanish calamity, an *imperial question*. It is nothing to say, that the exclusion of foreign ores is best for the English miner—that is but half the question. The alternative to be settled is this—is it best, or worst, for the public at large? Having proved, as they think, elaborately, and with great parade of figures, that protection is best for those directly engaged in mining, they think their work is done, and their body of evidence complete—that is, they establish, to their own satisfaction, the lesser branch of the argument; leaving the larger, and the ruling one, wholly untouched by their reasoning. They do not so much as say—proving it is out of the question—that protection is best for the public, as a whole; and, not saying that, they do not say anything absolutely to the point throughout the deeply-furrowed field of their polemics. They know quite well that figures and returns, artfully collocated and transposed, can be made to prove anything—and, therefore, of themselves, prove nothing. This has been made notorious by the tabular statements of the noble Member for King's-Lynn, as against those of the ex-Premier. Their proposition must be brought out of this labyrinth of hieroglyphics, and set before the public in a concise and tangible form, and then there will be a chance of its receiving a fair adjudication. As it has not been proved that protection is beneficial as a whole, so also it has not been proved that its removal will, in the end, be injurious to the mining interest, separately considered. The trade in Canadian timber was not ruined—nay, was not injured—by the cessation of the duties leviable on those of the Baltic. The lace and silk manufacturers of Nottingham and Spitalfields suffered but a momentary depression by the freer admission of foreign tissues. In these, as in the case of native ores, the transition from a fettered to a free trade may—nay, in all reason, must—occasion some individual inconvenience; but, the transition once accomplished, the new order of things will adjust itself to the new moulds, local and national, through which it is destined to flow, serving and satisfying equally well the public, as a whole, and also that particular section of it whose interests were for a moment shaken by the change.

Again, the disadvantage of the foreigner's position, as to the English market, has not been sufficiently taken into account. There are 3000 miles of perilous and delaying ocean between the mines of the American continent and the English market; and, if the mines of South America, and of the larger group of Caribbean Islands, can be worked more cheaply than our own, which we doubt, still, as against this, we have the advantages of greater mining skill and larger capital, and, as we think, of a richer matrix, out of which to raise our ores. For these reasons, standing out on the face of the question, we shall, for the present, limit ourselves to saying, that until it is first shown by the example and analogy of former changes, that this change will be injurious; second, that it is a miner's question, and one that ought not to be assimilated to the character of our commercial laws; and, third, that when the change is completed, there will not remain a clear and calculable advantage to the British miner over the foreign—until these points are satisfactorily made out, we shall continue to hold the opinion, that the public immediately, and the native miner next in order, will be rather beneficially, than injuriously, affected, by the contemplated changes.

The building and launching of a steam-ship, of 190 feet keel, and 200-horse power, at the port of Hayle, must be an event marking an epoch in the shipbuilding history of the county of Cornwall. It merits, as we think, a short commentatory notice at our hands. Undoubtedly, to increase the steam-power of this maritime kingdom, is doing good public service—multiplying and enlarging that species of strength at arms, which it is possible, at no very distant day, we may have occasion to bring into fullest exercise: at the present moment it is but an addition to our commercial marine, which, with other departments of our sea-service, as we nurse and carry forward to maturity, we shall maintain and secure that supremacy on the European seas—so essential to our progress and our independence. This particular vessel, it is true, is to ply upon the wide and winding Rhine, and, therefore, will not be a shaft in our quiver: but we have the greatest pleasure in knowing, that Hayle is able to turn out such a vessel, and we trust that others will follow from the same cradle, which the people of Cornwall may call their own—contributing, by their employment, to increase the merchandise of its shores, and, if necessary, to strengthen the circle of its defence. We had a good opinion before of the vigour and forwardness of the leading people of this port in promoting many a public work—but their floating from one of their building-slips a vessel of this *calibre*, is considerably beyond our highest expectations.

The Thames Haven and Dock Company have now, we believe, broken ground, and visibly commenced their great work for the formation of a harbour on the left bank of the Thames, for the reception of part of the shipping by which the higher basins of the metropolitan river are generally crowded. We look upon the creation of such a harbour as a great public benefit; it will, as we think, be an important accommodation to the coasting trade at large, and very much assist in freeing the navigation of the Thames from a multitude of vessels, either light or laden, which now sprinkle the margin of the river for a long way down, and sometimes choke up a ship passage through the upper section, called the Pool. We hope the haven to be formed will be resorted to—not by the Newcastle trade only, but by all classes of vessels coming coastwise to the port of London, which may have occasion to continue long in the waters of its crowded river. If the permanent relaxation of the Navigation Laws takes effect during the next session, the river will, it is probable, be crowded, beyond all precedent, with a hundred foreign flags, which our wise and compliant legislation has caused to visit our shores. The necessity for greater harbour room within the limits of the port will be a growing necessity, and this is one efficient means of providing it. The propriety and advantage of preparing for the vast coasting trade of the kingdom an assigned and settled rendezvous, cannot be easily overrated: to the great coal districts in the north of England the convenience will be as great as to the Thames—clearing the Tyne as it will clear the London estuary, and facilitating the unloading and the sale of cargoes. We believe the company purpose at present to stake out only 10 acres of harbour space. Well, that's a commencement; but, surely, the coasting trade of the United Kingdom will require a much more extensive area for the assembling of its numerous vessels.

Witton Park Iron-Works, Durham.—The make of the three furnaces at these works, last week, was upwards of 480 tons—one furnace working grey iron. The Witton Park works belong to Messrs. Bolckow and Vaughan, of Middlesbro'-on-Tees.

Copper Ore.—A vessel has arrived from Leghorn, with, besides a general cargo of American productions, 106 casks of copper ore—a rather unusual article of import from that quarter of the world.

Sale of a Coal-Field in Scotland.—The coal-field of Gauchland, in the parish of Galston, was brought to the hammer in the Town-Hall, Kilmarnock, on Thursday, when Mr. J. Findlay, Gargieston, became the purchaser, at 1370*l.*

Lambeth Extension of the South-Western Railway.—The preparations to carry the viaduct, on which the trains will run over Westminster-bridge-road, commenced on Thursday. The extension of this line to Waterloo-bridge will be completed, and ready for traffic, in February next.

Oxford, Worcester, and Wolverhampton Railway.—Near Stourbridge operations have been commenced, during the last few days, for the erection of the bridge across the Stour, on the line of the Oxford, Worcester, and Wolverhampton, which will be carried 90 feet above the valley. The embankment and bridge will be nearly a quarter of a mile in length.

The Stettin to Posen railroad has been opened as far as Woldenberg, the point where it crosses the road from Berlin to Koenigsberg and the Russian frontier. By the opening of this portion of the line, the road which is to connect Posen and Berlin, is half finished, and it is expected that the other half will be opened in the course of next year.

SALE OF A MINE.—IMPORTANT TO OUT-ADVENTURERS.

In the Stannaries Court, a question of considerable importance was tried, in the cause of Hicks *v.* Rule—viz.: the right of a portion of the shareholders to sell a mine and materials without the consent of the others, more particularly when the latter are the majority. It appears that a mine, called Wheal Robins, was commenced about the year 1839—Mr. W. Rule, the defendant, being captain, and Mr. S. Phillips, of Liskeard, the purser. It was divided into 256 parts, the petitioners and others being shareholders. It had always been a losing concern, and 3584*l.* had been expended by the adventurers. There was a meeting of shareholders at Webb's Hotel, Liskeard, on the 30th September, 1846, at which eight proprietors were present, including the defendant, and representing only 80 shares. The mine had been worked deep for copper, and shallow for tin; and, at the meeting, Capt. Rule stated that it was a discouraging affair, and would not justify further working. Mr. T. Milton, one of the adventurers, asked, if it would not be advisable to abandon the copper lodes, and work the tin at the shallow levels? when the Captain said it would not pay costs to do so. A resolution was then passed, and entered on the cost-book:—"That the working of the mine be immediately abandoned, and the materials drawn to the surface; and that the same be offered for sale, or disposed of in such manner as a committee, consisting of James Clymo, Samuel Phillips, Thomas Milton, and William Rule, shall think proper; and that they be requested to carry out this resolution with all possible dispatch." An advertisement, founded on this resolution, was inserted in the *West Briton*; but no tender was submitted. The Captain then said to one of the witnesses, the lord had declined to take the sett; and it appeared that, although he had valued the ore and materials at 230*l.*, he was allowed, afterwards, to purchase them, with the sett, for 175*l.*—the reduction, as was stated, being for the expense of raising them. Mr. Phillips, the purser, had objected to sell the mine; but, on Rule representing that removing them immediately would cause him great inconvenience and expense, he consented; and, on the 24th of October, 1846, he obtained it, and the materials, for 175*l.* On the 11th of December following, the adventurers had another and a very stormy meeting, when they objected to pass the accounts, and sale. Capt. Rule, being present, was accused by Mr. Milroy with having since made a profit of the mine; and, on being taunted with not having done so for the adventurers, he said—"the mine was his property, and he had a right to do with it as he pleased." He kept on working the mine, and raised tin to the value of 312*l.* Application had been made to him to restore their shares, and account for the profit and materials, which he refused; but, on hearing that another meeting was about to be convened, he wrote to Mr. Bishop, the solicitor, offering to restore the mine, on payment back of 175*l.*, with a premium of 50*l.*; interest, 4*l.* 7*s.* 6*d.*; six months' superintendence, at 3*l.* 3*s.* per month, 18*l.* 18*s.*—making a total of 248*l.* 5*s.* 6*d.*—Mr. Stokes (plaintiffs' solicitor) said, he believed he had since offered to give up the shares, if the adventurers would allow him to pocket the profits he had made. He contended that those plaintiffs who were not present, and had no notice to attend, were not bound by what took place; that the minority could not bind the majority; and, assuming that such a law was in existence, Rule must render back the shares, as he had been guilty of gross misrepresentation to the adventurers.—It being late, it was arranged that Mr. Hocken (for defendant) should be heard on Monday. On that day he addressed the Court for the defence. He first took an objection against the petition, as against a partner; and, therefore, all the partners must be included, in order to claim an account. He said that, in December, 1845, Capts. Nance and Taylor had inspected the mine, and found that it was scarcely worth going on with; they recommended an adit to be driven in a certain direction, and that, if no discovery took place, then the mine was to be abandoned. He contended that no fraud had taken place; and that defendant had only committed an error of judgment in allowing the materials to be sold—the buying them himself was a *bonâ fide* and lawful act. The mine had always been a losing concern; and, if defendant had since realized 10*l.* per month, it was only for a month or two. The meeting of September 30 were justified in supposing that the assent of the other shareholders would be given; and they had a right to sell the materials, which also involved the abandonment of the mine.—Mr. Stokes replied, contending that the fact of notices having been issued to the adventurers did not justify the abandonment of the mine; for the notice issued for the meeting of the 30th of September only mentioned that it was convened to consider future operations—whereas, if a sale of the materials and an abandonment of the mine was intended, it should have been expressed in the notice. Mr. Stokes then proceeded to argue that the management of a mine was with those who held the majority of the shares; and this was shown by the fact that, when a purser sued an adventurer for arrears of working costs, he could not enforce payment, without proving that the accounts had been allowed and signed by persons holding a *majority* of the shares.—The Vice-Warden then deferred judgment until Thursday. On that day, the Vice-Warden reviewed the facts of the case; and said, that the sale of the mine was never committed to those who had taken upon themselves to sell it; and again, that, under the circumstances, the defendant was both seller and buyer. He first negotiates for the materials on the presumption that he must raise them, and obtains them for 175*l.*; then he obtains the mine as a place of deposit; and then he proceeds to work the mine with the materials—which, unremoved, were worth 220*l.* These special facts seemed sufficient to set the sale aside; but, on the general principle, he had no hesitation in saying, that no majority of the adventurers can sell a mine, and throw a bar to a reluctant minority, to his or their interest therein. Circumstances may exist from which the consent of a minority, or of an individual, may be presumed, and under which a Court of Equity will not assist him in the recovery or discovery of the profits of his share; but an unconsenting shareholder will not be deprived of his interest by a majority, however great, resolving that the mine shall be sold. The defendant had over-reached his co-members of the committee and his employers—at first, by obtaining the materials at a lower price, on the plea that he must remove them; then in obtaining the mine, in order not to be obliged disadvantageously to remove them; and then he goes on using both, although, on his own representation, he had obtained neither for such purpose. The decree would, therefore, be, not that the defendant reconvey the mine—for it was never his—but that he had been working the mine for the plaintiffs, and that he account to them according to the tin bills; that an allowance be made to him for his time, trouble, and services, at three guineas per month; and that he convey back to the cost-book the shares of the plaintiffs. If the other adventurers come forward, probably, under the circumstances, the defendant would not think it wise to dispute their claim; but he (the Vice-Warden) could not order for more than the plaintiffs, because he did not know but that the other adventurers might consent to the defendant acting as he had done as their agent. The costs would follow the event, and be paid by the defendant.—In answer to Mr. Hocken, the Vice-Warden said, that the money paid by the defendant for the materials would be allowed, of course.

EXPENSES OF RAILWAY CONSTRUCTION.

	Per Mile.
Parliamentary Expenses.	
London and Birmingham and London and South-Western	£ 650
Great Western and Manchester and Leeds	1,000
London and Brighton	3,000
Law Charges—Engineering—Direction.	
London and South-Western	900
Grand Junction	1,200
Birmingham	1,500
Manchester and Leeds	1,600
Brighton	1,800
Great Western	2,500
Land and Compensation.	
Newcastle and Carlisle	2,300
Grand Junction	3,600
South-Western	4,000
Manchester and Leeds	6,150
Birmingham and Great Western	6,300
Brighton	8,000
Railway Works and Stations.	
Newcastle and Carlisle	12,000
Grand Junction	15,000
South-Western	18,450
Birmingham	38,280
Great Western	40,000
Manchester and Leeds	41,400
Carrying Establishment.	
Newcastle and Carlisle	1,300
Grand Junction	2,000
South-Western	2,350
Birmingham and Brighton	3,000
Manchester and Leeds	3,600
Great Western	4,800

In the case of the continental railways, the first three classes of expenses have not been so great. The "law charges," &c., on the Belgian, were 430*l.* a mile; on the Paris and Rouen, 600*l.* The "land and compensation," Paris and Rouen, 2300*l.*; Belgian, 2750*l.* In "railway works and stations," Belgian, 10,600*l.* per mile; Paris and Rouen, 17,000*l.* In the "carrying establishments," Belgian, 2450*l.*; and Paris and Rouen, 2400*l.* per mile. —*The Rail, its Origin, and Prospects.*

Shrewsbury and Birmingham, and Shrewsbury and Chester Railways.—The works of these continuous lines are now in active operation, but the progress making in the former is much the greatest—the latter having had so much difficulty to encounter in and over the sloughs near to Shrewsbury. Viewing the work on the line approaching Shrewsbury, in either direction, the expenses in labour will necessarily be very great, with the two bridges over the Severn; and to this, the erection of a commodious and extensive station-house will add an additional item.

Edinburgh and Northern Railway.—We understand, that on Friday, Capt. Simmons (of the Railway Board), along with Mr. Grainger (the engineer), and other officials of the company, inspected the railway from Burntisland to Cupar, and to Lindores Loch, previous to its being opened for traffic.—*Witness.*

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

The following details, respecting the manufacture of iron, &c., are substantially the same as the *Mining Journal* has already given, and, like them, are compiled from the recently-published report of the mining department; but, as they have the advantage of grouping together in a small compass all the most important facts connected with the iron branch of industry in this country, and of enabling the reader to see at a glance the most recently ascertained position of that trade, I have thought them worth giving.

First, it appears that there is no one single branch of manufacture in France which employs more persons than the manufacture of iron—the number of men occupied in iron mines and iron-works, in the year 1845, being 51,000. About the same number were employed in conveying ores, fuel, iron, &c., and in other labour connected with the manufacture of iron—thereby making 100,000 persons, at the least, who are dependent on iron-works. There were also employed, in 1845, 2047 hydraulic and 207 steam engines, of 26,504-horse power. The value created by these men and machines was upwards of 166,000,000 fr. (6,640,000*l.*) In 1840, the number of steam-engines was only 109.

The price of iron ore in France is 1 fr. 32 c. per metrical quintal; and, on deducting the cost of conveyance, and the rent paid to the State, the cost would only be about 60 c. (5d. Eng.) As this is less than what ore costs in other parts of Europe, especially in Great Britain, it is stated by many persons that, when the means of conveyance in France shall be improved—that is, when a web of railways shall cover the whole land—the iron manufacturers of France will find themselves to be in a particularly favourable position. An able writer in the *Journal des Débats*, whom I take to be M. Chevalier, inclines to this opinion. But what an immense number of years it will take to cover France with railways! Judging, at the paltry extent of railway which she only now has—though almost every other country in Europe is literally covered with iron roads—it will, probably, take centuries before we can calculate on railways for reducing, *generally*, the cost of manufacturing iron. Some of the great iron establishments will, no doubt, derive benefit long before that from railways—some, indeed, do so at this very moment; but that benefit they keep, and will keep, in their own pockets, until railroads shall become so general as to make the cost of conveyance from one end of the kingdom to the other comparatively trifling. Let it not be forgotten, that what causes France to occupy such an inferior position as an iron-producing country is not the want of iron ore, for she has plenty—nor the want of fuel, for she has wood in abundance, and has no lack of coal; but it is the great distance at which the fuel and the ore are from each other, and the consequent necessity of taking one to the other; and then, again, when the iron *is* manufactured, it has to be conveyed a vast distance to the great centres of consumption. The French, moreover, have not the enterprise to take energetic measures for removing this difficulty. Witness the failure of the project for establishing a railway from St. Dizier to Gray, to enable the ironmasters of the great iron district to obtain coal at a cheap rate—a failure, which took place entirely because they could not find heart to raise a few hundred thousand pounds; and yet the Government offered to help them with a liberal hand!

As to the remark that has been made, that the abolition of the rent paid to the State for mines would have an effect in reducing the cost of manufacturing iron, I most decidedly dispute it; for I find that, in the last budget of receipts presented to the Chamber of Deputies, the year's rent from mines only figured for rather less than 16,000*l.* (397,202 fr.), which compromised the rent of all mines—iron, coal, lead, copper, &c. This is very small, indeed—a sum, in fact, scarcely perceptible in the gross annual value of the mineral products of France, a value in which iron alone, as we have just seen, figures for 6,640,000*l.*

But, to proceed. 425 iron mines were worked in 1845, and yielded 26,640,000 of raw ore, and 1,250,000 tons of ore washed, &c. There were 432 *hauts-fourneaux* in activity, in 1845, out of a total number of 608; and these establishments manufactured 439,000 tons of cast-iron (*fonte*), and 342,000 tons of forged iron. In 1825, the quantity was 190,000 tons of cast-iron, and 144,000 of forged; and, in 1845, 295,000 tons of cast-iron, and 210,000 tons of forged. In 20 years, it will be seen, the production of iron in France has more than doubled; and it appears that, in 1844 and 1845, the increase in the production was greater than at any former period. Still the increase, though remarkable, bears no relation to the increase in the demand.

The importation of *fonte* is annually from 50,000 to 60,000 tons, and would be vastly increased were it not for the excessive duties. On the importations of *fonte* made by sea, the duties are equal to from 60 to 80 per cent. of the total value; and on iron in bars, they amount to a total prohibition. The total annual consumption of *fonte* in France, including the home production, and the importation, is about 500,000 tons, which is not much more than one-third of the annual production in England.

The manufacture of iron and cast-iron in this country, causes an annual consumption of about 550,000 tons of wood, and 850,000 tons of coal. Ten years ago, the consumption of coal was only about 280,000 tons.

The cost of iron in bars, in 1825, was 48 fr.; in 1835, 42 fr.; in 1845, 34 fr. That is a progress no doubt; but it is nothing like what the public had a right to expect in return for the grinding monopoly which it has so long allowed to the ironmasters. The present price of iron is (says the *Journal des Débats*) 35 fr. or 36 fr., which is from 30 fr. to 60 fr. greater than that of English or Belgian iron. Considering the great demand which exists for iron for railways and other purposes, your contemporary is of opinion, that the tariffs might be reduced without danger to the interests of the ironmasters. No doubt they might; but convince the ironmasters of that, if you can!

It may be necessary to observe, that in case the preceding figures should appear to clash with those already given in the *Mining Journal*, it will be found to arise from the fact, that in the present occasion, the measures are given in tons, instead of quintals; and that round figures are only employed.

The Government has just rejected the demand of the Compagnie Generale of the Loire to be constituted in what is called a *société anonyme*. This rejection can only arise from the dread which the Government entertains of running the risk of being dragged into the unpopularity by which the company is surrounded. The advantage of being a *société anonyme* is, that shareholders entertain greater confidence—inasmuch as, should misfortunes befall an enterprise, they can never be made answerable for more than the amount of their respective shares. In consequence of the refusal of their application to be constituted a *société anonyme*, the company has, it is said, determined to form itself into what is called a *société en commandite*—that is, a company in which three or four persons, or even one, are entrusted with the sole management of affairs—the shareholders, being unfortunately responsible for, though having no real control over, their operations.

Up to this moment, however, the directors of the company have not come to any decision, as to the course which it may be desirable to pursue; and it is not likely that they will do so for some days. The statement, therefore, of their intention to turn the company into a *société en commandite*, must only be taken, as I give it, as a mere rumour. Strictly speaking, I ought not to have referred to the matter at all, until something final is resolved on; but my anxiety to communicate the earliest possible information, must plead my excuse for committing what the French call an "indiscretion." I will just add, that I do not think your readers, who are concerned in the company, need feel the slightest alarm. The managing directors are men of the highest honour and the greatest prudence, and will take measures, whatever form the company may eventually be obliged to adopt, to protect their interests to the very uttermost.

The local hostility to the company appears to increase in intensity. Some of its workmen have laid a complaint before the Procureur du Roi, on account of the excessive reduction of pay to which, as they say, the company compels them to submit. It appears, too, from the local papers, that the dismissal of workmen is continually taking place, though slowly and gradually. A number of waggoners and such people have also made a complaint to the authorities, that the company will not sell them small coal for ready money, except at one or two of the most distant pits. This, they say, subjects them to serious loss, but they give no reason why the company should refuse to sell the coal. It is probable that all these complaints are grossly exaggerated; but, as I have repeatedly said, I think the company is wrong to give cause for complaints at all. The great prejudice which has always existed against it, and the many local interests which it necessarily injures, dictated to it, as a matter of common prudence, to do all in its power to conciliate its local population; instead of which it seems to have an incomprehensible sort of pleasure in giving real or fancied causes for public complaint.

The St. Dizier newspaper does not contain this week the usual quotations of the prices of iron; but it says, that the sale of the Duke de Bordeaux's wood was not effected, the price asked being too high in the opinion of the trade. An offer made by the ironmasters to take a certain quantity by private bargain, had, nevertheless, been rejected as being too low. The sale of the wood belonging to the King had not taken place. It is understood that his Majesty's agents are more moderate in their expectations than those of the Duke de Bordeaux.

Some of your correspondents, and many of your readers, complain with bitterness of the falling off in the exports of copper from England. The establishments which smelt copper in France appear to have good cause for rejoicing from the same cause. Official returns show that, in 1846, the duties received on the importation of copper into France were about 4,000,000 fr. (160,000*l.*) *lower* than those of the preceding year. The falling off is certainly very considerable; and the greater part of it, I understand, has taken place on the importations from England. This fact will attract the special attention of such of your readers as are interested in the copper-duty question.

The duties received in 1846, on the importation of *fonte*, were about 5,000,000 fr. *more* than in 1845; on coal there was a diminution of about 4 per cent. The importation of machines, &c., increased 42 per cent. The official returns, from which these quotations are made, show that England received 113,000,000 fr. of French products in 1846; no other country received so much. France only received of English products for 79,000,000 fr., which were much lower than she received from many other countries; and yet, though we are her best customers, and though we take an immense deal more from her than she takes from us, she will not consent to make any relaxation in favour of her excessive duties on coal and iron—two of our staple products—though all her population are clamoring for them. Nay, more, she has such an enlightened regard for her best customer, that she actually places heavier duties on coal and iron imported by sea, than on those imported by the land frontier, which it is clear can only be done to keep off our products—and, in addition to this, she talks of making such an alteration in her copper duties as shall expressly exclude our copper!

In consequence of the recent awkward disclosures that have been made with respect to the concessions of mines in Algiers, it has just been declared, by royal ordinance, that henceforth all concessions of mines, forests, &c., shall only be allowed to be made by ordinance signed by the King, and that in the event of the Council of State having reported favourably.

A journal, specially devoted to business matters, expresses the opinion, which has been frequently laid before the readers of the *Mining Journal*, to the effect, that the next great outbreak of speculating frenzy in this country will vent itself on mining matters. I again repeat my belief that, in the course of a short time, the mining world of France will be in a state of greater activity and excitement than it has ever yet been. Already are schemes, some of them of great magnitude, fully concocted, and only wait a favourable moment for being brought forward. It is worthy of mention, that enterprises for the smelting of copper on a grand scale are likely to be strongly recommended to the public. Within the last few days I have heard speak of two grand projects for smelting copper being about to be broached, one of which will require a capital of 200,000*l.*—*Paris, Wed.*

BELGIUM.—The Company of the Coal-pits, known as the *Reunion du Nord*, have obtained from the Government an extension of 36 hectares of coal-field, in the commune of Jumeut, province of Hainaut.

Some English and Belgian capitalists have just got up a powerful company for working coal-pits in the provinces of the Rhine. It has already purchased mines in the Grand Duchy of Nassau and in the Duchy. It will bear the name of "Company of the Mines of the Rhine." A Belgian gentleman, and an English gentleman, who was formerly mayor of Birmingham, and is proprietor of extensive iron-works in England, will, it is said, undertake the management of the new company.

A grand meeting of free-traders, of all nations, is to take place in Brussels on the 16th. Many of the most eminent free-traders of England have promised to be present.

A good dose of free-trade measures would be exceedingly useful to this country, especially if they would obtain it the privilege of introducing English and Scotch *fonte*, at a moderate rate, or free from all duties whatever.—*Belgium, Tuesday.*

MONSTER STEAM-ENGINE.—Since July last, the greatest steam-engine in Germany has been most successfully at work at a mine near Essen, the cylinder of which is 91 inches in thickness, 12 feet 7½ inches high, and weighs 286 tons; the two arms of the balance are 33 feet in length; the whole weighing upwards of 400 tons. The machine gives eight strokes of the piston, and produces 145 cubic feet of water per minute. Although it has been charged from the commencement with the *maximum* of density, it has worked with the greatest precision. This engine is of greater power than the one employed in draining the Lake of Haarlem, and may be considered the largest of the present day.

STEPHENSON'S ENGINES.—One of the earliest of Mr. Stephenson's locomotive engines is now employed conveying coals, on the Darlington Railway, at a less cost per ton than on any other railway in England.

AMERICAN LEAD MINES.—Mr. C. Lanman, in his work, *A Summer in the Wilderness*, says, that the lead mines on the Mississippi are still being worked, with great success; but such is the reckless spirit of commercial gambling in the States, that as many people lose fortunes as make them in their search for the ore. The shaft of the lead mine is generally about 80 or 100 ft. in depth, opening into a large chamber, whence galleries branch off in various directions. The walls and ceilings are mostly of pure sand, except where the solid mass of native ore glistens in the torch-light. It lies in square blocks, dove-tailed together as if so placed by the hand of man. To those who are luckly enough to discover a bed of the metal, their adventure is a fortune; but, perhaps, the majority of the speculators go on digging for years without success, and, as labour is dear, ruin is rapid. Subsequently, our tourist visited the upper regions of Lake Superior, in which about 100 English, American, and Canadian companies profess to be at work. Being a shareholder in one of them, he assumes the right of speaking with something like authority. His account is by no means encouraging. Not because the country is not rich in copper ore—on the contrary, he notices its quantity and quality—but on account of the ignorance and inefficiency of the persons who are sent to superintend the works, and the general want of capital. Notwithstanding all the puffing resorted to by the managers of these mining companies, a smelting furnace had not yet been erected, and only 8 out of the 100 companies had as yet (August, 1846) made any shipment of ore. About 500 persons are engaged upon the spot, as clerks or miners; but the men who are at the head are described as inexperienced and visionary men, who, having failed in every business which they had entered into on their own account, have now taken to the more profitable occupation of managing other people's. This is on the American side of the lake. Mr Lanman describes the state of things to be pretty similar on the Canadian shore: 20 companies are organised for working the copper mines on that side: but not a pound of ore has yet been smelted, or carried to the market. For himself he is desirous of selling his shares as soon as possible.

The first Atlantic steamer was the *Savannah*, Capt. Rogers, built at New York; she was 300 tons burthen, ship rigged; her engine was 70 or 80-horse power, low pressure. She proceeded from New York to Savannah, whence she sailed in 1819 for Liverpool, making the passage in 22 days. In passing the Irish coast, the smoke and steam from her chimneys gave her the appearance of a ship on fire, and vessels were dispatched from the Cove of Cork to her relief. From Liverpool she went to Copenhagen, Stockholm, St. Petersburgh, and Arundel, making the voyage from the latter port (in Norway) back to Savannah in 25 days. Crowned heads, ministers, officers of state, &c., visited her; and valuable services of plate, jewels, &c., were presented to her officers. She subsequently made the voyage to Constantinople and back, being the first steamer that traversed the Mediterranean Sea, as well as the Atlantic Ocean. She was afterwards purchased to run as a packet between New York and Savannah, under Capt. Holdredge, but was wrecked on the south side of Long Island. Capt. Moses Rogers, of Groton, Connecticut, commanded her on her first voyage out. Capt. Stevens Rogers, now living at New London, was the sailing-master. It was suspected at Liverpool that the *Savannah* came over to rescue Napoleon; his brother Jerome had just offered a large reward to any one who would take him off the Island of St. Helena, and hence the excitement her appearance created throughout England. She was the first ocean steamer ever seen in European waters.—*American Sun.*

COPPER ORE.—The revenue authorities having had under their consideration an application requesting that Lucas and Ewbank's wharf, situate in the Grand Surrey-docks, may be approved for the landing of copper ore, the wharf has been approved for that purpose as requested, upon proper and secure sheds being erected and fitted up according to the warehousing regulations for the deposit of the ore in bond under the locks of the Crown, until the assay has been made and the proper duty ascertained and paid thereon—it being distinctly understood that three samples of each parcel of ore are to be sent, as usual, to the collectors and controllers of Customs at the ports of Truro and Swansea (two to the former and one to the latter port), for the purpose of being assayed for duty by the approved assayers, at the merchants' expense.

IRISH TRANS-ATLANTIC PACKET STATION.

In our Number of the 21st August we returned once more, after a long lapse of time, during which public measures of pressing exigency occupied the attention of the Government, the Parliament, and the people, to a consideration of the question of a trans-Atlantic packet station, to be so situated as to lessen the time, risk, and cost, of navigation between the British Islands and the American continent. In the early part of 1845, it was announced by this Journal, that the then Board of Admiralty had, upon reference being made to it by the Treasury, as to which of the harbours on the south-west coast of Ireland was considered by the Board the best in every respect for a naval, and also trans-Atlantic packet station, as well as a depôt for troops destined for immediate embarkation for service in the Peninsula, or on the American continent, declared it to be its opinion that Berehaven harbour, in Bantry Bay, was the preferable of the then three harbours, as those from which that for such station and depôt was to be selected by the Government. This announcement, which we were then enabled exclusively to make by means of a communication to us, and derived from a source all but directly official, created an extraordinary sensation in the south of Ireland, and no little apprehension amongst parties in Great Britain, who were directly, or even remotely, interested, from personal motives, in the continuance of "things as they are," in respect to the packet stations then established. From Cork, Limerick, and Kerry counties, in each of which is one of the three harbours referred to, deputations were dispatched to Sir R. Peel, then at the head of affairs, to impress upon him the superior advantages of the harbour in the county it was deputed from. The deputation from Kerry claimed, and on good grounds, a preference for the harbour of Valentia, as a trans-Atlantic packet station; the Limerick deputation urged on his favourable consideration a port in the Shannon, called Tarbart, and which it was then proposed to connect with the city of Limerick by railway, and, through Limerick, with Cork, Dublin, and Belfast, by lines of railway then (in part) in progress of completion.

The Cork deputies pointed out to the right hon. baronet the palpable superiority, as they believed it to be, of the port of Berehaven, at and within the entrance of the magnificent Bay of Bantry, for both a trans-Atlantic and Mediterranean packet station, and particularly for a military depôt, from whence to embark troops for either the Peninsula, the Mediterranean, or America. To these several deputations the reply of the right hon. baronet was, in substance, the same; but, in respect to the plans or the intentions of Government, nothing satisfactory to either of the parties could be inferred from it, further than that the establishment of a trans-Atlantic station on the south-west coast of Ireland had been in the serious contemplation of Government. Sir Robert Peel intimated to them all that, in respect to the selection of a port for such station, the Government would be guided by the greatest facility of railway communication from the to-be-selected port to the nearest other Irish port having a packet communication with an English port, whence the shortest railway route was to the English metropolis. Upon this intimation, vague as it was, the Cork people assumed that port Berehaven, in Bantry Bay, must necessarily be selected as the terminus of the shortest sea voyage from Halifax, and, therefore, from New York—as, without question, the easiest of access from sea-ward—of ingress and egress, in all winds and varieties of weather—as the most secure for shipping of any, the heaviest, burthen—as having depth of water, and all the requisites of a safe and commodious harbour, for steam-vessels particularly—and as considerably the nearest to Cork harbour by railway, then constructing, than either Valentia or Limerick ports. From Cork harbour, the packets to Bristol then averaged in passage about 24 hours; from Bristol to London, 4 hours, by railway; from Bantry to Cork (a distance of 50 miles), by railway, 2 hours. But, taking the distance as it was then expected to be: by the construction of a railroad from Padstow (in Cornwall) to Exeter, thence to London, 8 hours; from Padstow to Cork, 10 hours; from Cork to Bantry, 2 hours—in all, 20 hours. Thus stood the question in 1845. We then stated that we could easily conjecture why Sir R. Peel had not been very explicit on the subject, considering, as we did, that he anticipated a formidable opposition to the establishment of a packet station in Ireland from Liverpool, Glasgow, Bristol, Southampton, and Falmouth; and a powerful confederacy in favour of the particular interests of all these places would have to be encountered by him in both Houses of Parliament.

In the early part of the session of 1846, the Marquis of Lansdowne took occasion to call the attention of the House to a matter of great national importance—the establishment of a packet and military station on the south-western coast of Ireland, and the securing of a good and speedy communication across the Atlantic. He, therefore, wished the Government would express their intention in respect to the selection of such station, while the lines of railway were under the consideration of the House. "He would (he added) give no opinion on the best point for a station, whether at the mouth of the Shannon, at Valentia, or in Bantry Bay; but he thought that there ought to be some understanding on the part of the Government on the subject." To this the Earl of Ellenborough (the then first Lord of the Admiralty) replied—"That he was obliged to his noble friend for his suggestions—but he would beg leave to inform him, that the selection of a station on the west coast of Ireland rested with the Treasury, and not with the Admiralty; but, he would say, with regard to the ports named for a packet station, he thought that Valentia would not be selected, Bantry Bay was better; but Cork was better than them both." The claim of Limerick was altogether passed over by the then first Lord of the Admiralty; since that time the subject, as we observed, in our renewal of its discussion in our Number of the 26th August, had been in abeyance, until again, and very recently, revived by a very urgent appeal to Government from the citizens of Limerick, to have the now fast improving port of that town selected for the station so long in contemplation by Government. The Valentia Railway Company also urge the claim of Valentia, as the port having the most rapid communication with Dublin; and again we find that, in the last week a deputation from Limerick waited on the Lord Lieutenant of Ireland, and submitted to his Excellency's consideration, "the value of the harbour of Limerick in reference to the all-important, the now urgent and imperial, question of trans-Atlantic communication." They urge that "Limerick, as the centre of commercial enterprise and agricultural wealth, with its capacious harbour, and its railways now approaching to maturity, and within a few hours of steam navigation of the Atlantic, appears pointed out as the fitting communication between the kindred empires of Great Britain and America;" and they respectfully call on his Excellency, "to submit to her Majesty's Government the propriety of adopting a city so circumstanced as the packet station about to be selected, and as the medium of that commercial and international intercourse, alike promotive of the well-being and happiness of both hemispheres." At the style, somewhat obscure though it be, of this address to the Lord Lieutenant, we are not disposed to cavil; but we would fain object to the description of the "capacious" harbour of Limerick "now approaching to maturity"—and would wish to know what peculiar advantages in the way of lessening the time, risk, and cost of navigation between the British Islands and the American continent, there can be in the town of Limerick "being within a few hours' steam navigation of the Atlantic"—or, in other words, why Limerick "port," at the confluence of two branches of a narrow river, not there navigable, except for ships of, comparatively to trans-Atlantic steamers, small burthen, and some 70 miles from the mouth of the Shannon, and some 100 miles from the point first made by ships from America, in their shortest navigation between Halifax and the nearest land on the south-west coast of Ireland, should be preferred as a trans-Atlantic packet station. But, let us hear the reply of his Excellency, as reported in the Dublin papers:—"In respect to the selection of Limerick as a packet station (said his Excellency), that would be, undoubtedly, of great general interest—there were rival claims for such station; but, when those railways were completed, to which reference had been made, the subject should receive the full and dispassionate consideration of Government." Now, it must be admitted that Sir Robert Peel himself could not have more dexterously evaded giving any intimation of the intention of Government on this subject, than did his Excellency the Earl of Clarendon in the above instance. The Limerick deputation of last week are left as much in doubt and perplexity on the selection of a packet station, as were those deputations that waited on Sir Robert Peel in 1845; but, nevertheless, the station will be established in a harbour on the south-west coast of Ireland, as certainly as that it is now in agitation. The next session will not pass over without a formal introduction of the question; but the Government will have need of support more powerful than it is now expected it can have to carry it through, as the opposition of particular interests in this country is, on this subject of an Irish packet station, almost too obstinate to give way to interests purely national.

RAILWAY ACROSS THE ISTHMUS OF PANAMA.—For many years the grand project of either cutting a navigable ship canal, or constructing a railway across the Isthmus of Panama, to join the Pacific with the Atlantic, has been the study of several eminent engineers—English, French, and Italian. Plans and estimates have been made out of the expenses and practicability of so important an undertaking, but hitherto so much opposition had been experienced by each party from the Government and authorities in carrying out the project, that, for a time, it has been in a state of abeyance. Several French adventurers have been foremost in this speculation; and, after very unsuccessful communication with the Government, they have at last succeeded in obtaining a concession to lay down a railway across the Isthmus, under certain conditions—that at the expiration of the term of the lease it then becomes the property of the State, which, however, can grant a new lease to the company. From the report of the engineer, it promises to be a very lucrative speculation, and can be carried out with but little obstacles, as the country is of a nature that the cuttings and embankments, tunnels, &c., will be without much difficulty, and a comparatively low expense, compared with European lines. The company will be partly composed of English, French, and Mexicans—the Government granting the land through which the line will run. After mature deliberation, the cutting of a canal has for the present been abandoned, although its practicability is beyond doubt, and may, some years hence, be accomplished. The establishment of a railway will afford not only a rapid transit for passengers and goods, but to the mining interest of Chili it will be most important, as also for the city of Mexico. By the facilities afforded by the South Pacific Steam Navigation from Valparaiso, calling at all the ports between that Liverpool of South America, and Lima, &c., the miners will be able to overcome the great drawback, which has hitherto been so severely felt—the want of a quick means of transporting the metal and ore. Arrangements are making by the Royal West India Mail Steam-Packet Company to call at Chagres and Vera Cruz twice a month, on and after November next, instead of once, as at present—an advantage that, no doubt, will be highly appreciated by all those embarked in mining adventures in Mexico, Chili, Peru, &c.

COALS FOR INDIA.—The East India Company has issued a notice that, on and before Wednesday, the 15th inst., they will be ready to receive tenders for 3000 tons of the undermentioned sorts, to be delivered at Aden, on the southern coast of Arabia:—West Hartley, Carr's Hartley, Buddle's ditto, Davison's West ditto, Hartlepool West and Glasgow hard-splint coal (screened), Risca black vein coal (handpicked). Although coal is very plentiful in the western and north-western provinces of India, the expenses of conveyance to Calcutta, Madras, Bombay, Aden, and Ceylon, are so great, that the company finds it far more advantageous to make their contracts in this country for the supply of their steam-ships, &c. The introduction of railways in India, will be the means of throwing open a wide field to every branch of mining industry in that rich mineral empire, as coal, iron, lead, copper, and other ores, exist to a very great extent; but, from the want of the means of a cheap conveyance, mining enterprise has been but little attended to, although it offers a most lucrative investment to adventurers. Water, wood, and all the necessary adjuncts to the working of the mines, can be obtained at a trifling outlay; and the facilities that railways will afford to convey the ores and metal for shipment, will cause a new era in the annals of mining in India.

ADCOCK'S PATENT SPRAY PUMP.

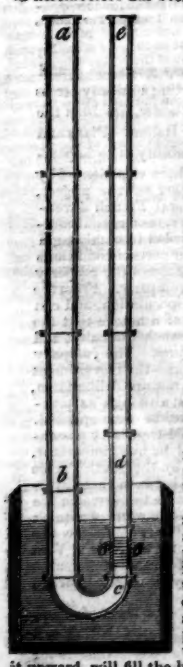
In compliance with wishes to that effect, expressed by many of our subscribers, we now give a descriptive account of the theory of this invention, and illustrate the modes of its application by a series of diagrams.

As remarked by our intelligent correspondent, "An Inquirer," "the theory is as novel as it is beautiful;" and a knowledge of it seems to be so intimately blended with a correct appreciation of its practical application, that we think it would be somewhat difficult to define the one without the other. The theory, and the origin of the discovery, may be thus explained:—Mr. Adcock had made some considerable improvements in pump-work, by one of which he could make *one valve* perform the duty of *four clacks;* and, elated by his discovery, he eventually proposed to himself this question:—"*Is it possible in raising water from mines, and other deep places, to do away with clacks, or valves, altogether?*" He states, that he knew this desirable effect could not be produced, if the water had to be raised from the mine in a compact or solid state, as in pump-work; for, in a pit, 1000 ft. in depth—the column of water being also 1000 ft.—the pressure of the water against the sides of the pipe at the bottom of the mine, would be about 440 lbs. on each square inch; and no pipe that could be conveniently applied in practice, could resist that pressure. He, therefore, in the next place, questioned within himself, whether the water could not be brought up from the mine in a divided state; and the obvious reply to it was, if the water be brought up in a divided state, it must be in the state of vapour, or of rain. The chain of reasoning, thus far continued, led him to investigate the descending velocities of drops of rain, compared with what those velocities should be, by the laws of gravitation; and he found that, by the laws of gravitation, the rain ought to descend towards the earth with a speed constantly accelerating—so that, if the cloud were high from which it fell, it ought by its velocity, and, consequently, its momentum, to inflict evils of a serious nature on all animal and vegetable life. Then how is it, Mr. Adcock asks, that such effect is not produced? and he replies,—Simply by the resistance of the air. Each drop of rain, while in the cloud, may be considered to be in a quiescent state. It begins to descend from a state of rest, with a motion constantly accelerating, and thus it continues, until it acquires a certain amount of speed; from which time forth the motion of its descent is uniform. This uniformity of motion, Mr. Adcock states, is produced by the resistance of the air; by its not being able to flow from beneath the drop beyond certain rates of speed under certain amounts of pressure, and the ultimate amount of pressure being determined by the weight of the drop. Hence, the drop descends with an accelerating speed at first, compressing the air more and more immediately beneath it, until the resistance, and the compression, become equal to the weight of the drop: thenceforward, its motion is uniform.

Mr. Adcock then proceeded to investigate the greatest descending velocities of drops of rain; and he found that, under ordinary circumstances, they were from 8 to 12 ft. in a second; from which time, the remaining portion of the reasoning was clear and decisive—namely: if water in globules, of a certain size and weight, like drops of rain, cannot, under ordinary circumstances, and in consequence of the resistance which they meet with in the air, descend with a greater speed than 12 ft. in a second; then, it is certain that, if those drops were in a quiescent state, and a current of air were made to move *upwards*, at a greater speed than 12 ft. in a second, those drops would flow upwards instead of downwards, *and that, too, whatever the height;* hence, the invention was perfected. He had only to try the experiment in secret. It far surpassed all that he had expected from it; and he forthwith secured the patents.

Now, the theory, as thus given by the patentee, appears to us to be as true, and as unerring, as any recognised law of Nature can be; and we see practical exemplifications of it in the smoke passing through the flues of our chimneys—in the cinders driven upward by the blast of our blacksmiths' fires—in the great deposit of carbonaceous and minutely-divided minerals, found in the horizontal flues of our copper and lead smelting furnaces—and in the dust taken up, and driven by the winds from our turnpike-roads. In short, let a person take a small piece of cotton wool, or other light material, and loosening it from between his finger and thumb, it will, in a quiescent atmosphere, fall to the ground; but let him loosen the same in the current of a chimney, and it will be taken upward by the draught.

Mr. Adcock, in his pamphlet, proceeds thus:—When atmospheric air is condensed to a ¼ lb. pressure per square inch, beyond the atmospheric pressure, and is liberated from its confinement, it moves, or has a tendency so to do, at the rate of 173 feet in each second of time; at ½ lb. pressure per square inch, the speed, due to the pressure, is 245 feet per second; at ¾ lb. pressure, 296 feet; at 1 lb., 340 feet; at 1¼ lb., 375 feet; at 1½ lb., 410 feet; at 1¾ lb., 436 feet; at 2 lbs., 467 feet; at 3 lbs., 555 feet; at 4 lbs., 624 feet; and at other pressures, with other velocities or rates of speed, as may be known by reference to, or consulting, the treatises that have been published on the science of pneumatics. Now, instead of raising water in the mass, as hereinbefore described, by pumps and pump-rods, and such like contrivances, Mr. Adcock avails himself of the mechanical effects that may be obtained from the velocities of the air, as due to the pressures hereinbefore made known, or any other pressures that circumstances connected with mines, in different localities, may prove to be desirable. He causes the water that must be raised from the mine, or from a lower level to a higher, to be dispersed and carried up in drops, like drops of rain; but the velocity of those drops *upwards*, in consequence of the velocity of the air, is far greater than the *descending* velocities of rain. For drops of rain, when not receiving an impulse from winds, can only descend through the atmosphere with the speed of about 8 feet in a second, when the diameter of each sphere, or drop of rain, is the hundredth part of an inch. When the diameter of the drop is the sixteenth part of an inch, the greatest descending velocity through the atmosphere is about 17 feet in a second; and the velocities in a second, through the atmosphere, for drops of rain of other diameters, may be thus stated:—for drops of rain an eighth of an inch in diameter, 24 ft.; for drops three-sixteenths of an inch diameter, 30 feet; and for drops a quarter of an inch diameter, 34 feet per second. Whereas, the velocity of the air, when allowed to escape from a pipe upwards at one pound pressure per square inch beyond the atmosphere, and without making any deductions for the friction against the sides of the pipes, is about 340 feet in a second. But it should be stated that, when the air is commingled with the water that must be carried up by it from a mine, or from a lower level to a higher, its motion, to a certain extent, is retarded. The velocity of the drops of water upwards, however, by this mode, or by these modes of raising water from mines and other deep places, is far greater than the velocities at which rain usually descends, as hereinbefore has been described.



In the annexed wood-cut, *a*, *b*, represents a pipe, made of zinc, galvanized iron, or other material, to convey a current of air from a fan, or blowing cylinder, to the bottom of the pit, or shaft, of the mine. *c*, a bend-pipe, uniting the downcast-pipe, *a*, *b*, to the upcast-pipe, *d*, *e*, through which pipe, *d*, *e*, the air, and the water driven up by it in drops, like drops of rain, are conveyed to the surface of the earth, or to the adit, or to any required place of discharge.

By the wood-cut, it will be seen that the lower part of the apparatus is immersed in a sump, or reservoir of water; and that, at 6, 6, the upcast-pipe is provided with five slits, at such distances below the surface that the water may, by its gravity, flow into it. Those slits, in an apparatus which has been practically working, are six inches apart, one from another; and are opened to any required distance, or shut at pleasure, by aid of a screw movement, so adjusted, that any quantity of water, however large or small, can be admitted into the upcast-pipe, or be excluded from it.

By the rapid revolution of a fan, or by the upward and downward motion of a piston within a blowing-cylinder, by power being imparted to either of them by a steam-engine, water-wheel, or other prime mover, atmospheric air is condensed to the requisite amount of pressure, and flows thence down the pipe, *a*, *b*, through the bend, *c*, and up the pipe, *d*, *e*, until it meets the water flowing through the slits, 6, 6, which it immediately disperses into drops, and, by its upward current, conveys to the surface of the earth, or place of discharge.

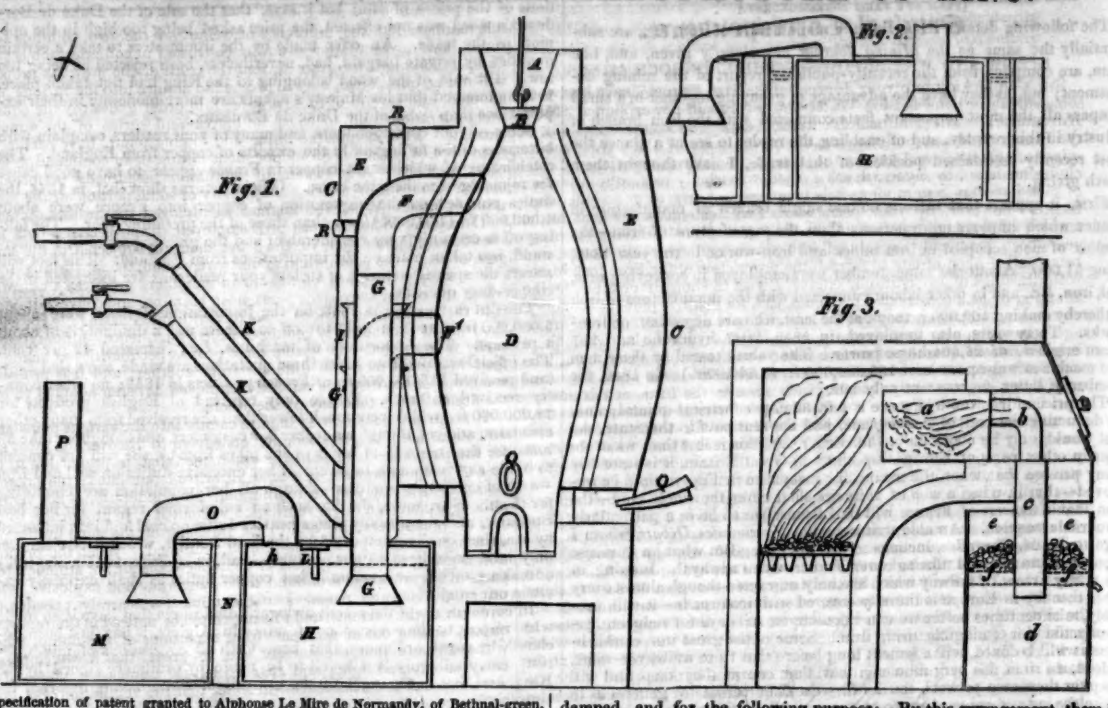
By this process it is evident that, so long as there is a current of air moving upwards in the upcast-pipe, *d*, *e*, and the weight of water admitted into that pipe be proportional to the pressure, the water will be dispersed into drops as fast as it flows into the pipe, and will by the current be delivered at the top. But, from accident or the negligence of the engine attendant, the slits that admit the water may not be closed prior to the stoppage of the current of air. Should such be the case, the water so admitted, not having a current of air to carry it upward, will fill the bend and pipes to a height equal to that of the head of water in the sump or reservoir; and the height of such water in the pipes being greater than the pressure which the condensed air from the fan or blowing-cylinder can displace, other means must be devised, and resorted to, to relieve the bend of it.

[*To be concluded in next week's Mining Journal.*]

SOMETHING STARTLING.—A German gentleman advertises that he has at last solved the problem which the greatest chemists have hitherto thought impossible—viz.: by discovering an ingredient by means of which the azote of the atmosphere can be totally destroyed, and thus producing a perfect vacuum—a new, cheap, and valuable motive power being obtained.

ANOTHER CURIOUS COINCIDENCE.—The day on which the *Great Britain* steam-ship was released from Dundrum Bay, was the anniversary of that on which she was christened at Bristol, by Prince Albert.

IMPROVEMENTS IN THE MANUFACTURE OF ZINC.



[Specification of patent granted to Alphonse Le Mire de Normandy, of Bethnal-green, Middlesex, for improvements in the manufacture of zinc.—Patent dated March 20, 1847.]

The improvements in the manufacture of zinc, set forth in this specification, are divisible into two methods; the first applicable to the reduction of the ores of that metal directly—that is to say, not in pots, crucibles, or mouffles, but as in the smelting of iron ores in blast-furnaces. The second in preventing the loss of zinc in the shape of white oxide of zinc, which passes into the atmosphere pending the reducing and smelting process—also applied in the manner hereafter described to the reduction of zinc and the oxides of zinc, which result from the treatment of the ore in the direct way, according to the first method. At the *Fig.* 1 of the accompanying drawing, A, A, marks a hopper, composed of plates, surrounded by fire-bricks; B, a valve, or trap, for feeding the furnace, C, with fuel, and charging it with ore; the interior, D, of this furnace is composed of refractory fire-bricks of the very best quality; the outside, E, of the furnace, is also composed of refractory fire-bricks, but less costly than those forming the interior; and there is a space left between the interior and exterior of the said furnace during the building thereof, which is to be filled with fire-clay tightly rammed in to prevent the volatilized zinc contained in the furnace from passing off by any other channel than that destined for the purpose. F, marks the neck of the furnace, which is also composed of materials similar to those that form the other parts of the furnace. In connection with the lower and bent portion of this neck there is a pipe, G, which the inventor prefers being of wrought-iron rivetted together; the upper end of this pipe is securely fixed to the neck, F, and the lower end, which is enlarged, dips several inches into water, contained in a close tank, H; there is another pipe, I, of larger diameter, placed around, and on the outside of the pipe, G, in order to afford space between them for the admission of cold water through the supply pipe, K, for the purpose of keeping the pipe, G, cool, to ensure which the supply pipe, K, is placed at a higher level than the top of the pipe, I, by which the heated water is continually being displaced by the descending column of cold water—and such heated water may either be let run to waste, or conducted therefrom by any suitable arrangement. The tank, H, is filled up to *h* with water, and there is a partition, L, which extend across the said tank, and dips several inches into the water contained therein, for the purpose hereafter mentioned. M, a tank, similar to that marked H, the two being kept distinct by a wall, N; but there is a communication between them by a pipe, O—one end of which is fixed to the top of the tank, H; and the other and opposite end passes through the top of the tank, M, and dips into the water contained therein, for the purpose hereafter mentioned. P, a pipe for the exit of uncondensed products which pass from the furnace. Q, Q, mark tuyere irons. R, R, mark openings for cleansing the necks, F, F¹, in the event of there becoming choked. The process is conducted in manner following:—Fuel is supplied to the furnace by the trap—the quantity being augmented from time to time, and the blast modified in a similar manner to that usually practised in smelting furnaces, until the heat is up, or it has attained a white heat, which will occupy from two to three days; after this, the charge is put into the hopper, A; and the trap, B, being raised, the charge falls into the furnace—the trap being closed immediately after to prevent ingress of cold air; the said charge is composed of equal quantities of ore (prepared in the usual way), and coke; the blast is then turned on; and as the coke is burnt, and the ore reduced, the charge falls, and then the combustion, and volatilized zinc passes by the necks F, F¹, and pipes G, G¹, into the tank H, to be condensed—the oxide of carbon, carbonic acid, and other products passing through the pipe P; and in order to render more certain the condensation of the volatilized zinc from the furnace, the gases and other products are caused to descend and pass under the immersed portion of the partition, L, from whence they again pass through the water along the pipe, O, into the tank, M—by which time it is assumed that the metallic particles will be condensed, and deposited in the said tanks. The inventor proposes employing two necks, F and F¹, placed at different levels, although he states that this is not indispensably necessary to the success of the process, but he has found it answer well, and prefers using two necks, inasmuch as the combustion and volatilized zinc passes into the tanks in greater volumes, and with less force, than when only one neck is employed. The inventor further states, that he prefers employing hot-blast for the purpose, as being more economical than cold-blast, but does not limit himself to it; and he proposes to employ a blast—the pressure of which is 2½ lbs. to the inch; but, according to the nature and quality of the ore to be treated, in like manner the blast will require to be modified. At the conclusion of the process, the tanks, after the water has been drawn from them, are found to contain a deposit of grey oxide, mixed with metallic zinc. *Fig.* 2 exhibits another arrangement of the tank, marked H, at *Fig.* 1, which the inventor has found to answer well. It consists simply in surrounding the tank with water, instead of placing the water inside the tank, as before-mentioned, with reference to *Fig.* 1, by which a more uniform temperature is maintained; and, in order to collect and prevent being lost, the lighter and smaller metallic particles, which remain suspended in the water when drawn off, the inventor proposes placing such water in vessels, or tanks, there to subside, when the metallic particles may be collected. The metallic products obtained by the foregoing means, is then to be mixed with five times its weight of coke or coal, and treated in crucibles, pots, or mouffles, in the usual manner, and subsequently run into lumps or ingots. That part of this invention, which has reference to preventing the loss of zinc, is effected in the following manner:—The drawing, at *Fig.* 3, exhibits a transverse and vertical section of a Silesian oven, showing the mouffle, *a*, which contains the ore to be treated, placed therein; *b*, marks a pipe, or conduit, called "boot," through which pass the volatilized zinc, and other products, from the ore in the mouffle; and to the lower end of this pipe, or "boot," there is affixed a pipe, *c*, which terminates in a tank, *d*, containing water for the purpose of condensing the products from the ore in the mouffle. The inventor proceeds to state that, according to the modes hitherto practised, the end of the pipe, *c*, has been left open to the atmosphere—by which the smaller and lighter metallic particles, in their passage to the condensing tank, have been lost. To obviate which, the inventor proposes to employ the following means:—Across the top of the tank, *d*, he places a cylindrical-shaped vessel, *e*—the upper end of which is open, and the lower end has bars, *f*, placed across it, and fixed thereto; into this vessel he places pieces of coke, slightly damped, and for the following purpose:—By this arrangement, there is sufficient space for the gaseous products to pass off into the atmosphere; and, at the same time, the lighter and uncondensed metallic particles, in their passage upwards, are arrested by the coke, by which a great saving is effected. The inventor states, that substances, other than coke, would answer the purpose; but that the coke employed for this purpose, he mixes with the ore in charging the mouffle; and when the substance to be treated is other than zinc, he proposes to separate the metallic particles deposited upon the coke, as before mentioned, by washing. The inventor states, that he has only given the Silesian oven as an example, since the Belgian or other modes might be employed with equal success.

The inventor claims the arrangements and apparatus above described and referred to, according to the *first* method (with reference to the treating of ores in the direct way), as constituting improvements in the manufacture of zinc—but disclaims the use of cold blast for that purpose; and he further claims, as an improvement in the manufacture of zinc, the arrangements described and referred to, with reference to the second method, by which he prevents the loss of zinc in the manner stated.

Patent-office and Designs Registry, 210, *Strand, Sept.* 7.

GREAT SUSPENSION BRIDGE IN HUNGARY.—The stupendous bridge over the Danube, which is intended to unite the two important towns of Pesth and Ofen, is rapidly advancing towards completion. The land-piers, on each side of the river, are completed; and the two piers in the bed of the river will be ready for the chains by next spring. The chains for this stupendous bridge are being manufactured in England, and will in a short time be forwarded to their destination. The extreme length of the bridge is 1200 ft. (the width of the river at Pesth); the main span, over the centre, is 600 ft.; and the other two spans are 300 ft. each; and, when completed, it will form one of the finest suspension bridges in Europe, and an ornament to the engineering talents of W. Tierney Clark, Esq., M.I.C.E., of Hammersmith, under whose superintendence the bridge was designed and constructed. Since the year 1840, Mr. Clark has annually visited Pesth, to inspect personally the progress of the works; and the contract for making the coffer-dams was taken in the same year by that spirited contractor, George Burge, Esq. All the machinery, steam-engines, cranes, crabs, &c., for the pile-driving, was supplied from England; and, from the limited knowledge of industry and mechanical powers in that country, it was found requisite to send out a great number of competent mechanics, to instruct the native Hungarians, who, under English working instruction and patience, are now an ornament to their country, as as practical and efficient workmen. Thus, will Pesth Suspension Bridge stand a grand monument of English engineering, and of the first civilization of Hungary. The foundation-stone of this great national work was laid, in the coffer-dam on the Pesth side of the river, in July, 1842, by his Imperial Highness the Arch-Duke Charles of Austria; since which time the works have been gradually progressing; but the deficiency of roads in Hungary rendered it a matter of great difficulty to obtain the stone and other materials for the works. Although Hungary has vast resources of granite, and also fine stone of every description, and (near to Pesth) vast mineral resources, yet, from mismanagement, these resources are, in the present state of the country, perfectly useless. Not a single road is there in the whole country; in one part corn is in abundance, while in other parts they are often complaining of famine, and yet, from the deficiency of roads for communication, no relief can be given. The rotten policy of Austria is also a great check to the progress of Hungary; but the universal spreading of knowledge is making rapid progress there, and Hungary may, with perseverence, rank high as a commercial nation. From the deficiency of roads in Hungary, Mr. Clark saw it would be impossible to obtain the quantity of granite required from the Hungarian quarries: the great granite quary, near Linz, in Upper Austria, was then taken—where immense blocks were quarried for this massive masonry—many of the blocks are from 12 to 16 tons each, which form the ice-breakers of the piers in the bed of the river. These weighty masses were floated from Linz to Pesth, in clumsily-built boats—a distance of 400 English miles. The expense of the bridge, when completed, will be 6,000,000 florins, or 600,000*l.* The present communication between Pesth and Ofen is effected by means of a bridge of boats, constructed on military principles; but, on the ice making its appearance, the bridge is taken away; and, during the winter, the passage is very dangerous, and as many as 300 persons have perished in one season, in trying to effect a passage when large masses of ice have been floating down the river.

STEAM-ENGINE IMPROVEMENTS.—Amongst the designs recently registered under the Act, there is one by Mr. William Hyatt, of City-road, engineer, for "an apparatus for regulating the supply of water to the condensers of steam-engines," which gives fair promise to realise the statement in his specification, "that the quantity of water supplied to the condenser shall never exceed that actually requisite"—thus effecting a saving of water, and preventing the injection passage from furnishing "a too copious supply thereof." This desideratum is carried into practice by keying, upon the fly-wheel shaft of the engine, a pinion, which takes into a spur wheel; in each of the arms whereof, slots are formed; into as many of which, as occasion may require, studs, or tappets, are inserted, in order that, as the fly-wheel and pinion revolve, vibratory motion be communicated to a vertical lever; to which is attached a horizontal lever, connected at the other end by a bell-crank lever to a rod, attached to the top of a valve, placed in the injection passage—this valve having a grooved seat, to prevent its fitting too closely in its seat.

ANTI-INFLAMMABLE COTTON.—A physician in Georgia, in recently attempting to prepare gun-cotton from a receipt sent him by a brother physician, was unsuccessful, and found, to his astonishment, that it would neither explode nor ignite, being anti-flammable; on investigating, to find out the cause, he found that he had not used the right acid, muriatic acid we suppose. He repeated the process, and the result was the same—so that he claims to have discovered a method of rendering cotton incombustible. He says, that this cotton can be prepared with little expense, as he has tested the matter sufficient to know that it can be manufactured into cloth, the lint and texture of the cotton not being in the least injured, but capable of being made into clothing with as much ease as from the common material.—*Scientific American.*

Original Correspondence.

STEAM AND WATER-POWER—THE FRONGOCH MINES.

Sir,—In looking into your Journal of the 21st August, I have read with some surprise a letter headed Water-power *v.* Steam-power, signed "Mine Adventurer." The "Mine Adventurer" says, "he knows something of the Frongoch Mines, and the manner of drainage of the Cardiganshire mines all his life;" and yet, in the face of the above assertion, he concludes his letter, by saying, that his object was wholly to gain information of such importance to mining; this language appears to me rather conflicting—however, by your permission, I will submit a few facts of the manner of drainage relative to the Frongoch Mine. Having for many years been practically acquainted with steam and hydraulic power, and being called upon of late to furnish the proprietors of the Frongoch Mines with drawings of an hydraulic engine, I wish to show, if possible, by the adoption of such constructed machines, that for them, in point of economy, cheapness, and power, they are far superior over any other mode of drainage. It will appear to you, and your numerous readers, that where there is but a limited quantity of surface water—and that that water, by a judicious arrangement of machinery, can be made available upon the surest calculation, in constantly keeping such mine as the Frongoch drained—that nothing would be more commendable, or wise, in a management than to make use of the cheapest and best application for that purpose. This has so far been effected, as to render the Frongoch Mine one of the most productive concerns in that district—yet the management of Frongoch still see the means of deriving far greater advantage from the surface water, by introducing a class of hydraulic machinery, which is more than probable has never entered the head of the "Mine Adventurer." The "Mine Adventurer" has stated that the whole of the water-power from the contributing ground, connected with the Frongoch Mines, will not amount upon an average throughout the year, when applied to a 48-ft. wheel, to more than 12-horse power: let this be granted—it is quite easy to show that the average amount of power, when applied in the way intended, will be three times as much as is necessary to drain the Frongoch Mines: to make this intelligible, the hydraulic arrangement, and the position in which it will be fixed, will augment the power from 12 to 47 horses; and, at the same time, the hydraulic engine will not consume but one-third of the water necessary to work the 48-ft. wheel, equivalent to 12 horses—besides leaving a surplus of water of 8-horse power, to be applied to dressing or any other purpose. It is also worthy of remark, that the whole of this engine and downfall column complete, will be erected for less than 500*l.*, and will be kept in regular course of working for less than 10*l.* per annum. Now, Sir, I think, with these facts, it will puzzle "Mine Adventurer" to make out a case, whereby the expensive mode of draining by steam would be preferable to that of water; some of these machines have been working under my superintendence for years past, and are an evidence of the indubitable fact, that mines which would not pay when drained by steam, will make a good profit when drained by water. My object is not controversy, but to show that a small stream of water, with a good fall, well applied, is invaluable—the proof of which is, and will be, fully manifested in the Frongoch Mine.—Engineer: *Sept.* 8.

RAMBLES THROUGH SOUTH WALES.

Sir,—Since my return from a pedestrian tour through Wales, friends, anxious to get information which is supposed all travellers must be possessed of on their return, have made it a point of coming to evening parties where I have been accustomed to meet them. Amongst other things, I have mentioned what for years I have much desired to see—the gigantic water-pressure engine at Talargoch Mine, in Denbigh, or Flintshire, (which, I have really forgotten), has been erected; and to save being further laughed at, at any expense, I apply to your valuable Journal, which only can give it, through your own knowledge, or that of your most valuable correspondents. Reading in your Journal, three or four years ago, an encomium on this machine, and the skill and credit due to the engineers concerned, made me anxious to see it. This I have done within the last fortnight; and, if my information be correct, the cylinder is 50 in. dinmeter; the pipes, or column, carrying the water to it, 40 in. diameter—the stream supplying it for eight months in the year, about 1000 gallons per minute; for the four months, about 1600 per minute. This is all the water that can be made available—the surplus being flood water, which only continues for two days at a time, at the very furthest, in the greatest falls of rain. May I be allowed to ask, if my statement, as to size of piston and pipes, with the quantity of water as power, is fairly stated—if not, under which of these heads does it differ? The pump lifted to the day level, if I mistake not, is 24 in. diameter—the depth, perhaps, about 70 fms.—whilst the pressure on the piston is 30 fms. Not being an engineer, I might, through your widely-circulated Journal, be allowed to ask, if all these arrangements are considered by the engineer connected with them on the very best construction? And instead of costing, as all this machinery did, as stated in your Journal, from 12,000*l.* to 14,000*l.*, whether all the power might not be made available on a much less gigantic scale—say, for one-third part the cost spent in this machine? I have only one more question to ask—What is the horse-power of this machine; and what would be the horse-power, if the scale should be reduced to one-third the area in piston and pumps? Persons, presuming themselves to be engineers, may attempt an explanation to others unacquainted with these matters; but I hope the matter will be fully and fairly explained through your scientific paper. My only object in writing this, is to prevent further ridicule.—A Pedestrian: *Coniston, Sept.* 6.

THE THEORY OF VENTILATION.

Sir,—Air and good ventilation are, with the coal getter, synonymous terms; and, in the subject under notice, they are so closely related, when the former is in motion, that although there may be a distinction, there can scarcely be a difference. The atmosphere is a compound body, possessing the properties of great expansibility and compressibility—its weight, which may be estimated at 15 lbs. per square inch, varying in the exact ratio of that expansion or compression. I do not presume to claim anything I may advance in these communications—my object is, to condense the principal characteristics, and the leading principles, of an important branch of science, so as to present in one view that information which has hitherto been widely scattered; and, if I do not present them in a new dress, I hope, at least, to claim the merit of being a careful compilator.

The theory and practice of ventilation are so nearly related, that I may, in some instances, appear to diverge from the theory to the practice; but, should this be the case, I hope such digression will only serve to explain, and render more clear, the theory. I am well aware that, in the attempt to compress a volume within the compass of a few letters, several important points may be overlooked, or too slightly noticed; but let those who would cavil with me upon this head, endeavour to fully and clearly comprehend the depth and extent of what I shall produce; and I am of opinion, that what is overlooked, will not be a matter of much moment: I, therefore, proceed at once to my task, and lay down the following propositions upon which are founded the theory of ventilation—viz.: 1. Equal columns of air of the same temperature, and each posited at the same distance from the centre of the earth, would remain in *statu quo*.—2. If the weight and leverage of two bodies are equal, neither can preponderate.—3. The weight of the atmosphere is variable. Other equally self-evident propositions, or axioms, might be added to the above; but I presume that those, based as they are upon the unalterable laws of Nature, will be found the basis of every good system of ventilation; and I will go so far as to say, that ventilation will be good or bad in the exact ratio of its coincidence with these rules. In illustration of the first proposition, let us suppose that two shafts of equal depth are sunk to a bed of coal, and a communication formed betwixt them in, and upon, the level bearing of the coal. It will be evident that both columns of air, existing under precisely the same circumstances, and, consequently, of the same temperature and weight, would remain mutually balanced, and balancing each other; and although both shafts, and the communication formed betwixt them, is filled with air, yet it is evident there is no ventilation. If, under these circumstances, the air is allowed to continue undisturbed, a very short time would suffice to convert the healthy medium into the mephitic vapour—blackdamp—alike destructive to health and life. In this instance, we have a communication betwixt two shafts and no ventilation. This, to your non-professional readers, may appear paradoxical; but, in accordance with the first proposition, it must necessarily be the case; and also in accordance with the second, as the weight, &c., are equal. Practically, this is rarely the case, as a small difference in the level of the pits at the surface, or if they are not placed exactly upon the level bearing of the coal, will cause a ventilation known by the name of natural, as opposed to artificial. There are a great number of pits, and some of extensive workings, ventilated in this manner; but the difference of weight of the two columns being so small, natural ventilation is not to be trusted in collieries subject to fire-damp. Taking it for granted, that the truth of the previous propositions will not be questioned, we will proceed to inquire into the various methods adopted, and several of those proposed, in order to destroy the equality of preponderation, and to cause an ingress and egress of the atmospheric currents. Fire, steam, the lifting and forcing pump, have each severally been applied, either as an independent means, or in combination with the other methods. Any system of ventilation, as already premised, must consist of means of altering the gravity of some portion of the air in the mine or shaft. Whatever method is employed, the result is intended to be the same. When rarefaction is employed, the air becomes bulk for bulk specifically lighter than in the other shaft not subjected to the same degree of heat—the equilibrium is destroyed—and, the air rushing down the one to supply the place of the air in the other, produces a current, with which the collier sweeps the passages in his mine, and conveys in, and with it to the surface, the various gases met with in its passage. By what method this is produced, is matter of little consequence—although it necessarily follows that one system must possess peculiarities of action, or effect, in a great measure, different from another; and it is probable that some one of the methods variously employed, is better adapted to produce the desired effect than any of the others.

It is our province now to inquire calmly into the various plans and modifications used, or proposed, and endeavour to discover the most suitable for the purpose. It must not be understood that, in proportion to the excess of preponderation, is a mine ill or well ventilated; the preponderation may be great, and no ventilation. Preponderation is not ventilation, although there can be no ventilation without it. In proportion to the excess of preponderation, and to the sweeping of the mine by the preponderating current, is a mine well or ill ventilated. When the preponderation is great, and the sweeping or coursing of the air not attended to, some parts of the workings are found to be dangerous and explosive, when the principal roads and passages of the mine are scarcely passable for the strength of the current; and this may often be noticed in the reports of inquests, arising out of accidents from explosions of fire-damp, where the witnesses state that the current was so great, that it was impossible to carry an exposed light; and that all felt the unpleasant effects of it who were exposed to its influence—in short, that the ventilation was good, or, as they attempt to prove, too good: but, although there has been an excess of air, there has been no ventilation—the coursing of the current has not been attended to; so that, while the great thoroughfares of the mine, the principal roads—in short, those parts of the mine which are shown to the uninitiated as specimens—has been swept by an impetuous current: the inner workings—the scene of the miner's daily labours, and where there is, consequently, an aggregation of life, vitality, and danger—have been neglected; there has been an accumulation of gas—in fine, no ventilation. It is apparent that ventilation to be worthy of the name, must consist of two parts—viz.: a supply of air equal to the wants of the mine, and a regular distribution of it through the workings—the distribution may be properly classed as practical; but, although not in accordance with the title, "theory," will require an examination. It will be evident that two pits sunk to the coal, and nearly upon the same level at the surface, or that one pit bratticed, are quite inadmissable, so far as a ventilation approaching perfection is desired; and it is only through a strict attention to the ventilation, that pits so circumstanced can be properly conducted; and, if the same care and attention is bestowed upon pits situated in the most advantageous situations, with respect to each other, it is highly probable that their ventilation would be perfect.—F. Best: *Sept.* 3.

ATMOSPHERIC RAILWAY TUBES.

Sir,—Whatever be the material these tubes are made of, or the perfection or imperfection of their valves, large tubes, acting with low vacuums, appear to be more economical than small ones with high vacuums—at least, Mr. Samuda so expressed himself in the lengthened discussion which took place on this subject before the Institution of Civil Engineers:—"Mr. Samuda would rather have confined his present observations to this point, as being the foundation on which Mr. Stephenson's conclusions were based; but he could not omit noticing one great element of error that he conceived Mr. Stephenson had introduced into his calculations. All his deductions were drawn from experiments in which the vacuum ranged from 18 in. to 24 in. of mercury—so that, even if they had been correctly drawn, they would not have furnished any true indication of the economy of the atmospheric system, as the degree of vacuum at which it was proposed to work ordinary trains, was about 15 in. of mercury—for the waste of power augmented exactly as the degree of vacuum was increased. It was well known, that a perfect vacuum was not attainable; and if the apparatus was taxed, to the extent of approximating, as closely as its capabilities would admit, it was evident, that the effort would, at every step, become more difficult; and for this reason, it would be injudicious to carry it so far. If it had been intended to work the system to 24 in. or 25 in., as presumed by Mr. Stephenson in his comparison, his mode of treating it would not be so objectionable; but it had been ostensibly put forward, that the working point was calculated at 15 in. or 16 in.—that the scale of the apparatus, for performing the traffic of a line of railway, was based on this supposition, and any point beyond this would be used only on emergencies—that, in fact, the use of higher degrees of vacuum would be the exception, rather than the rule; and the use of them towards the upper end of the scale, should be discontinued altogether in an economical point of view. The employment of these very high degrees of vacuum ought, therefore, to be discarded from the calculation, and the apparatus should not be taxed to a degree, that experimental researches and great emergencies could alone justify; the results would then show, according to Mr. Stephenson's own observations, a striking superiority due to the atmospheric railway, with regard to the transmission of power, when compared with locomotive engines."—An Engineer: *London, Sept.* 7.

The Austrian Lloyds' at Trieste, within the last few years, has assumed a considerable development. It now possesses 25 large steam-vessels, among which are some with engines of 250 to 300 horse power. The vessels make regular services between Trieste and the Levant. They conveyed in 1846 upwards of 260,000 passengers, and specie to the amount of 50,000,000 florins (130,000,000 fr.), exclusive of merchandise. At present the Austrian Lloyds' is causing five large steamers to be built, for increasing the communication between Trieste and Alexandria. There is an immense bazar in its hotel at Trieste, which may be considered a perpetual exhibition of the newest productions of national and foreign manufactures. The hotel also contains an immense reading room, in which newspapers from all parts of the globe are received. The Austrian Lloyds' publishes four periodical works—viz., a political and commercial journal, which bears the name of the establishment; a literary journal; a weekly sheet devoted to manufacturing industry, and a review of political economy. The number of workmen constantly employed is about 800, all of whom are lodged in the establishment. A library and reading-room are at their disposition, and every evening they are taught vocal music gratuitously.

The "Great Britain."—We understand that the inspection of this noble ship has been brought to a close, and that all the scientific men who have been engaged in the examination agree in the opinion that she is quite sound, and free from all material damage in her hull. She is still on the Prince's Dock gridiron; but, owing to the application made on Thursday last to the dock committee, and the disposition evinced by that body to accommodate any other large steamer which might require to be repaired on the gridiron, the company are at present only proceeding with such necessary repairs, at her bottom, as will enable them to float her any moment. We visited her yesterday, and found, as we anticipated, that her bottom was but slightly injured—the only dings of any consequence being one of about 10 ft. long, right under her bilge, amid ships. The men on board say that this was caused by the working of the vessel during the heavy gales which she encountered in November last. This, however, will be easily repaired, and, with the exception of some few holes and loose rivets, is the only damage done to her bottom—a fact which, considering the exposed situation in which she was stranded, reflects the utmost credit on all the hands connected with her. The upper works and cabins of this noble specimen of naval architecture, as may be anticipated, are much injured; as is the stern, outside sterre post, and all the after end of the vessel, which was more particularly exposed to the roll of the sea, as she lay ashore in Dundrum. As yet nothing positive is known as to the intentions of the proprietors with respect to her further and final repairs. In the opinion of many, the great difficulty will be the engine; for it is well-known that it has never yet fairly answered the expectations of its constructors—however, it has been most minutely inspected, and has been pronounced to be quite as good as it ever was. Most of our readers are aware that it was built to work 1000-horse power; but the general impression is, that even with the improved boilers, repaired last summer, it never worked more than 600-horse power, even at its best speed. In addition to this drawback, the indisputable inefficiency of the chain belt, by which the screw was worked, must itself lead to serious alterations in the engine, if it should again be placed in her. It was a notorious fact, to all who ever crossed the Atlantic in her, that she had to be stopped nearly every day, in order to adjust this complicated chain. In fact, we believe, if she had returned safely from her last trip, that two new cog wheels would have been substituted for it, by which it was anticipated that the screw could be more effectually worked. Speculation is busy relative to her future destination, and the trade she is to be put into; but as no authentic information has been obtained on this point, we refrain from giving rumours.—*Liverpool Albion.*

Aberdeen Railway.—The various contracts on this line, south of Montrose and Brechin, are now almost completed; and that portion, it is expected, will be opened for traffic early in October next.

THE RAILWAYS OF BELGIUM.

The railroads, not merely those in operation, but those in a course of construction, and those for which concessions are granted and companies have been formed, present, perhaps, the most interesting object among the modern features of Belgium, and prove more than anything else the capacity for industrial development existing in the country. Remembering the vast amount of English capital that is ventured in these undertakings, I think I cannot be wrong in supposing that a compact view of the system will be interesting to your readers.

The one side claim of M. Rogier, the present Prime Minister, to be considered a benefactor to his country, consists in his having in 1834, as Minister of the Interior, originated railways in Belgium. The establishment of the Government line in 1834 was certainly the first step towards what has since become a revolution of the highway system of Europe. Yet the Belgians, with all the advantage of a Government unity, began under impulse. Their object was to get to Cologne as quickly as possible, yet they were obliged to include the large towns. The State holds now about 347 miles English of working railway. This took nine years to construct, and the charge was very costly. They might now be made twice as effectively for two-thirds the money. At present, in many parts, there is only a single line; and the rails and engines are wholly inadequate in weight to the work required. In spite of all the ridiculous excess in the number of *employés* (all Government berths), and the bad system of management, including too few trains and too costly working, they pay 6 per cent. Had they been constructed as our later lines have been, and were they worked with a view to business, and not to Government patronage, they might pay 6 or 7 per cent. with ease. The Government have spent (up to 1846—1845) 6,000,000*l.* or 7,000,000*l.* in this way, when the railway wants of the country wholly exceeded the means at the command of the State; and the then Minister of the Interior, M. Deschamps, determined to throw open all future lines to foreign capitalists—a most fortunate resolve, for the consequence is, that not even England itself is better supplied with railway communication. Looking at the map, it presents a perfect web of railways. Every one of the nine provinces of Belgium is interpenetrated, the only part at all deficient being a small district on the north-east. Besides the Government lines, which, starting from Brussels, extend to the ports of Ostend and Antwerp, and run to the frontiers of Germany, France, and Holland, there are no less than nine companies actually formed with their capital, and in many cases with their lines rapidly advancing. Let us enumerate them:—

1. The Antwerp and Ghent. By this State line Antwerp is connected with Ghent by a branch from Malines, and you have to make a detour similar to that *viâ* Reigate from London to Dover. The new line is almost a direct one. It passes through a flat, but very populous country. Some idea of the cheapness of construction may be formed from the fact, that its 30 miles of length have not cost 200,000*l.* But, by a strange infatuation, not only is it a single line, but, being a foot less in width than the other lines of the country, it must be completely isolated. It enters Ghent, too, at the opposite side of the city to that of the State line, and its terminus at Antwerp is on the other side of the Scheldt. The line is open, and is very curious. The engine and tender form one machine, which burns coal, not coke, the boiler and reservoir being formed on the engine, and the tender being literally only a coal skuttle. It is really a sort of pocket or toy railway, where everything is light and cheap in formation and working. No heavy loads can be taken at any speed. It only requires to be worked by female drivers, stokers, and police to be perfect. Yet it pays, and the shares are at a good premium amidst universal depression. The capitalists are almost entirely Flemish and French.

2. The Sambre and Meuse, consists of a line with branches, for the speedy conveyance of the coal of Charleroi into France, instead of by the tedious and costly navigation of the Sambre and the Meuse, the latter not being navigable more than six months in the year; and for the conveyance of the minerals which lie in the centre of the district at a considerable distance from the coal. This Sambre and Meuse country also abounds in other elements of railway traffic, such as timber, building stone, marble, manufactured iron, &c. It may be called a mineral line, and will much aid in developing the important coal and iron trade of Belgium. Coal is in abundance at Charleroi, whence the line starts, as also are iron-works, while iron ore is in abundance at Frair, Moriaime, &c. The latter is in demand at Charleroi, while both coal and iron are wanted in France, which the rail will reach, in the department of the Ardennes, at Vireux, on the Meuse. This is, in fact, the Stockton and Darlington line of Belgium, and likely to be one of the most profitable. From the nature of the country, however, the line will be a difficult one to be in some parts. It was originally intended to be a single line, the branches to be worked by horses; but now it is decided to make it a double line, with locomotives, the traffic being found to be too heavy to be worked by a single line. The capital, originally 630,000*f.*, is to be increased to 1,000,000*f.* The works are far advanced, and a portion of the trunk, and one of the branches (from Bers-6 to Tamaette), is to be opened this year. No canal can be made in this district.

3. The Charleroi and Erequalines, of 16 miles, with a capital of 520,000*f.*, in French and Belgian hands chiefly. The works, which are very difficult and expensive, are far advanced. It will be the shortest line from Germany to Paris, in connection with the Creil and St. Quentin, but is chiefly designed to carry coal and iron to parts where there is a great demand.

4. The Namur and Liege connect those important towns, but its chief line (42 miles), has one disadvantage—that of running parallel with the Meuse, on which there is a cheap traffic, including steamers. The river, however, is navigable only a part of the year. The capital at present is 1,000,000*f.*

5. The West Flanders traverses the province after which it is named, in a cheap flat country, densely populated in villages and towns. Altogether, the line is about 90 miles long, of which 32, from Bruges to Courtrai, are open. It forms the chord of a bow of railways, and saves, for goods and travellers, a considerable distance between Lille and Ostend, and Bruges and Courtrai. It joins the Government lines at Bruges and Courtrai, and affords to an immense population the benefits of railway travelling. Coal from Tournay can be supplied to the whole of West Flanders, and can be exported to Ostend; while imports there from the Baltic and America can be sent direct to all parts, and especially to the north of France. The capital of 840,000*f.* appears to be quite sufficient, and the line is chiefly in the hands of Englishmen of business, determined to conduct it well.

6. The Tournay and Jurbise, 29 miles, capital 500,000*f.*, including 11 miles of a line from St. Trond to Hasselt, is the opposite part of the country. A great part will be opened in September. The capital seems small, but the company have arranged with the Government that the company shall make the line, and the Government providing the working stock and working the line, the gross receipts being divided between the two.

Nos. 7, 8, and 9 are the Louvain à la Sambre, capital 776,000*f.*; the Great Luxembourg, 3,000,000*f.*; and the Belgian Eastern Junction. They are all necessary schemes, which severally provide for the provinces of Brabant, Namur, and Luxembourg. With the exception of the first, however, they are not much advanced. From the foregoing sketch it will be seen how great is the amount of active industry at work on railroads in Belgium.—An Englishman: *Morning Post.*

Remington's Aerial Bridge.—This ingenious structure, the model of which was described in the *Mining Journal* of Saturday last, is now open to the visitors at the Surrey Zoological Gardens—numbers of whom repeatedly cross and recross it, and expressed general astonishment at the strength of a fabric composed of such slender materials. The inventor is Mr. Remington, of Alabama, a gentleman who has perfected several contrivances of great utility in various departments of art, and who, in the present instance, has demonstrated the extent to which the economy of materials may be carried even in the greatest works. At first view, Mr. Remington's bridge would impress the spectator with the idea that it was utterly inadequate to bear the weight of a solitary passenger; but after he has undeceived himself upon its capabilities in that respect, he will be completely at a loss to account for the prodigious strength which it exerts. On consideration, however, of the peculiarities of its construction, the difficulty will disappear, and the advantages of its application in a variety of circumstances be established. The chief portions of the fabric are the abutments, or wooden frames, from which the bridge is suspended, or rather, on which it rests. They are formed of a simple framework of die-square timber, about 12 ft. long, and sunk 5 ft. in the ground. The timbers of each abutment are made to rake, or incline, at an angle of about 70° from the river, for the purpose of better resisting against the tension of the bridge when loaded, and are strongly connected by cross scantlings. On the summit of each abutment is a rectangular frame, rising slightly towards the water way, and carrying two transverse scantlings, 6 ft. apart. The four laths, or stringers, which form the basis of the footway, are laid upon these scantlings, to which they are keyed, and which give to the bridge the peculiar curve, on which its efficiency partly depends. But it is chiefly to the mode of forming the stringers that the ingenuity of the arrangement consists, and which, on several accounts, is remarkable. As it would be difficult, or, frequently, impossible, to procure pieces of wood of the required size, to connect the abutments, recourse must be had to the process of scarfing—by the adoption of which, in this instance, stringers of 83 ft. in length have been formed by Mr. Remington. They have been made in five scarfs, united by glue (made for the purpose by Mr. J. Lowe, the head-carpenter of the Surrey Gardens, by whom the structure was made and put together), and possess throughout their length the longitudinal strength of fibre due to their thickness at each point. They vary considerably in their section, as it is taken from the centre, being 3½ in. at each end, and only 1 in. square in the centre. These singularly small dimensions have nevertheless been found to carry several heavy loads, with which the efficiency of the structure has been tested. Transverse bars are tacked upon the stringers, at the interval of an inch or two; and with the addition of a rope on each side to serve as a rail, the bridge is complete. To understand how it happens that a combination of materials, apparently so frail, has carried 16 men, each bearing timber, and that, as we are assured, and make no doubt of the statement, it is capable of bearing 500 men, at the same time it must be understood, that the principal elements of the footway—viz., the stringers—are formed and arranged according to the known principles of a science of comparatively modern creation, embracing the facts relating to the strength of materials. The principle upon which the construction proceeds may be thus briefly explained:—A slender prismatic beam, though requiring great force to tear it longitudinally, would nevertheless easily give way to a transverse force very much smaller. If suspended by its extremities, and the force made to act at the centre, the rod would snap in the centre; but if one of the points of suspension were shifted, then it would snap near the other extremity. This circumstance is applied to the purpose of a permanent footway by the position of the scantlings, or fulcra, on which the stringers rest, and the operation of which is to remove the tendency of the bridge to break in the centre, and throw that liability on the thicker portions, near the abutments, which are fully able to resist the strain. The stability of the structure may also be referred to another principle—viz., that a beam in a horizontal position, fixed at one end and pressed down at the other, is liable to break off near the fixed end. Here, by the scarfing of the stringers, the central scarf unites the two portions, into which each stringer may be supposed to be divided, and resists at a long leverage its tendency to snap at the fulcrum. These considerations, though not of a very recondite character, are nevertheless necessary, to reconcile the spectator to what must strike him in the first instance as being nothing short of an anomaly in the laws of physics. But there the bridge is to assert, by its astonishing performances, the truth and easy application of these simple principles, and the economy which it is possible to introduce into fabrics of the kind by their adoption.

Improved Pumping Machine.—On Saturday and Monday week, some experiments were made on the Leeds and Liverpool Canal, with a view of testing a newly invented hydraulic machine by Mr. Scott, engineer to the Liverpool Water-Works Company, to be applied to the pumping of ships and general purposes. A small boat, provided for the occasion, was drawn through the water at the rate of 4½ miles per hour; and though the water was allowed to flow in through the bottom in a powerful stream, the action of the pump, which was kept in operation merely by the pressure of the finger and thumb, was sufficient to prevent any accumulation of water within the boat. The machine may be said to be nearly self-acting, the power being obtained by a column of water passing, by means of a pipe, through the boat, and producing a vacuum, which is, by an ingenious application, made to produce the most extraordinary results. The action of the pump is increased in proportion to the speed of the vessel, the ratio being as the square of the distance, so that almost an unlimited power may be obtained. It is said that a vessel of 400 or 500 tons might, with one of these pumps, be kept dry with almost any conceivable amount of leakage, and that by the labour of one man; besides, there is no probability of the machinery getting out of order, or the pump being chocked, which is so often the case with the ordinary pumps. The principle is exceedingly simple, and possesses the recommendation of cheapness.

THE EXPLOSION OF THE *CRICKET*.

The adjourned inquiry commenced on Monday last.

The CORONER, addressing the jury, said—Gentlemen, I shall not have occasion to detain you long to-day, as an inspection of the boat, on the part of the Government, has not been made. After the last meeting I immediately put myself into communication with the proper authorities. I wrote to the Secretary of State for the Home Department, calling his attention to the fearful nature of this occurrence, and the importance of instituting a full and thorough investigation into the whole of the circumstances, in the hope that the Government would think proper to appoint some one on their part to make the requisite examination. A reply to that letter was immediately received by me, stating that the Government would institute an inquiry, and I was put into communication with that view with the Board of Trade. The result has been that, on Saturday, Mr. Thomas Lloyd and Mr. Robert Hughes were nominated by the Government to make an investigation of the machinery and of the remains of the boat. The high reputation of those gentlemen makes it unnecessary for me to say anything respecting them, except that their appointment is a sufficient assurance to the public that the most rigid and scientific inquiry will be made into the cause of this sad disaster. They are men of great practical knowledge and experience, and will immediately proceed to make an investigation—indeed, I believe they have already commenced it. The course of investigation which I felt myself pledged to recommend at the previous meeting, has been acquiesced in—namely, that the inspection should be made in the presence of the engineer and proprietors of the boat; also, of the engineer of Mr. Joyce, and of Mr. Joyce himself, if he thinks it necessary to be present. This arrangement will ensure a thorough and fair investigation The only evidence which I shall trouble you with to-day, will merely complete the medical testimony commenced on the last occasion of your meeting; and also supply a link in the chain with regard to the removal of one of the bodies to the hospital. I shall then adjourn the inquiry for a week, and restrain all further evidence until you assemble again; and, in the meantime, I shall consider what will be the best course to adopt with regard to the manner in which it shall be adduced.

The necessary evidence having been completed, relative to the identity of the bodies, and an application having been made by Mr. Chambers, on behalf of the company, for the vessel being restored to them immediately after the Government inspectors were satisfied, which was ultimately agreed to, the meeting adjourned until Tuesday next.

At 5 o'clock on Monday evening, Mr. Thomas Lloyd and Mr. Robert Hughes, of the steam department at Somerset House, proceeded to investigate the cause of the accident on board the vessel. There were also present, Mr. Bedford (the coroner), Mr. Galloway, Mr. Smith, jun., Mr. Joyce, accompanied by his foreman, and Heaseman, the engineer of the boat, and also by another engineer. The inspection of the vessel, by the two first-named gentlemen, was most minute—they having been appointed by the Board of Trade, under the provisions of an Act which came in force on the 1st of January last, 9th and 10th Vict., cap. 100, entitled, "An Act for the regulation of steam navigation, and to compel sea-going vessels to carry boats." There are four sections in the Act on the subject of an official investigation, requiring a report to be made to the Board of Trade of all accidents of a serious character, empowering the board to appoint inspectors to make a report, with authority to examine witnesses, &c. It is the first time the Act has been enforced on an accident, and from its provisions much good may be expected on steam navigation. The safety-valves, which had remained untouched, were opened, and most minutely examined. We may state, pending the inquiry, the following particulars of the boilers:—The casing, or outer shell, is composed of ⅜th inch iron, and the dome, or steam-chest, of iron 5-16ths thick, and not 5-6ths, as erroneously stated. The valves are 2 9-16th inches in diameter, and, in our opinion, of a very questionable construction—being perfectly flat, and resting on a flat seat; total length of levers about 2⅞ inches; fulcrum, 2¼ inches; and cast-iron weight at end of levers, 6 inches diameter, and 4½ inches deep. The tubes are 66 in number, and 2¼ inches internal diameter, by 4 feet 9 inches long. At the request of Mr. Lloyd, the unexploded boiler was opened to ascertain whether the tubes in that boiler had been left dry; but they were found to present the same evidence of a sufficient supply as those of the exploded one. It was stated by the engineer, that an alteration of the front plate to the extent of nearly 2 in., was perceptible, after the boat had been on the station only a few weeks; also, by the superintendent engineer (Clark), that the valves had repeatedly stuck fast, and been found so by him, whilst the boat was on her passage, when he had released them, by jarring the stalk of the valve with a chisel bar. No direct evidence could be procured as to the pressure exerted by the Salter's spring balance; but it was stated by Skinner, the former engineer of the vessel, that they were screwed down to indicate 45 lbs. on the index. Neither of the boilers have any stays above the tubes, or in the steam-chest, if we except a short one leading in an angular direction towards the steam-chest. After the shell of the exploded boiler had been viewed, an experiment was tried to test the strength of the dome, or steam-chest, by hydraulic pressure. A fresh dome having been constructed, 4 ft. 6 in. high, and 2 ft. 3 in. in diameter, and rivetted to a plate of a corresponding curvature to that of the casing, or shell, of the exploded boiler, the valve contained about five square inches, and the leverage employed being 8 to 1, the joint of the valve casing gave way before three half-hundred weights were lifted—thus stopping the experiment. With all due deference to the promoters of this experiment, we would suggest the importance of testing the strength of the *remaining boiler*, if such tests are admissible—when the strength to resist fracture will be given at the weak and unstayed portion, instead of selecting the strongest part, and which was, in all probability, separated from the shell, by striking against some obstacle in the passage of that shell out at the after body of the vessel. We have no doubt that every fact will be elicited by the gentlemen who have been appointed, and we look forward with much interest to the adjourned inquiry on Tuesday, which we shall duly chronicle at length, accompanied by engravings of the boiler, and some exclusive information.

LITERARY NOTICES.

Observations on Limes, Calcareous Cements, Mortars, Stuccos, and Concrete; and on Puzzolanas, Natural and Artificial; with Rules for Making an Artificial Water Cement, equal in Efficiency to the best Natural Cements of England. By Major-Gen. Sir C. W. PASLEY, K.C.B. Second Edition, Part I. London: John Weale, High Holborn—1847.

The value to be attached to cements for hydraulic works, which will *set* under water, and remain firm and durable as the stone itself, has led engineers, at every period of architectural eminence—from the time of the Greeks and Romans up to the present day—to investigate and experimentalise on the various descriptions of limes and mortars with which their country abounds. The work before us is the second edition of a publication of the experimental researches and discoveries of Major-General Pasley, who, in consequence of having received an order, in 1825, from the Duke of Wellington, then Master-General of the Ordnance, that practical architecture was in future to form a part of the course of instruction for the junior officers of the corps of Royal Engineers, at Chatham, under his direction, he was induced to investigate the properties of water cements and limes; and has since been continually engaged in the endeavour to obtain an artificial cement, from a mixture of lime and clay, in consequence of the celebrated Smeaton having declared, that those adapted for building under water were all composed of a mixture of lime, and of a clay suited for brick-making. We give the author's opinion of Smeaton's discovery in his own words:—"Of all the authors who have investigated the properties of calcareous mortars and cements, from time immemorial unto the present day, our countryman, Smeaton, appears to me to have the greatest merit; for, although he found out no new cement himself, he was the first who discovered—in, or soon after, the year 1756—that the real cause of the water-setting properties of limes and cements consisted in a combination of clay with the carbonate of lime: in consequence of having ascertained, by a very simple sort of chemical analysis, that there was a proportion of the former ingredient in all the natural limestones, which, on being calcined, developed that highly important quality—without which, walls exposed to water go to pieces, and those exposed to air and weather only are comparatively of inferior strength. By this memorable discovery, Smeaton overset the prejudices of more than 2000 years—adopted by all former writers, from Vitruvius, in ancient Rome, to Belidor, in France, and Semple, in this country, who agreed in maintaining that the superiority of lime consisted in the hardness and whiteness of the stone—the former of which may, or may not, be accompanied by water-setting or powerfully-cementing properties; and the latter of which is absolutely incompatible with them." This discovery was the basis of all the attempts to form an artificial water cement, and which Major-General Pasley, after several complete failures, succeeded in, in the most complete and satisfactory manner—specimens of which may be seen at the Brompton Barracks, Chatham, in which it has been used for the lining of water-tanks, cement for walls, casts for ornamental vases, and chimney-pots, &c., in which it has become perfectly inundated under water—has stood the severest frosts—and, in tenacity, was found superior to Harwich Cement, of good quality—the Harwich and Sheppy stones, together, forming the best water cement in England. Having shown the practicability of forming a very superior artificial water cement (which may, however, be used for all architectural purposes), the work proceeds to explain the numerous experiments which were resorted to, to test its strength, bearing powers, &c., and which, in every case, shows its complete success. The author has introduced numerous cuts, tabular matter of resistance to pressure of various bodies, and instructions for testing the qualities of limes, mortars, and cements. The work, upon the whole, appears to us to be one of the utmost importance to engineers and architects—more particularly in hydraulic works—and most undoubtedly deserves a place in every professional library.

A Description of the Structure and Functions of the Human Skin: to which are added, some Practical Remarks on the Uses and Application of the Impermeable Spongio Piline and Impermeable Piline. By A. MARKWICK, Surgeon. London: Epithem Company—1847.

The importance of attending to the healthy state of the skin, and upholding its beautiful structure, in order that it may be capable of discharging the important functions for which it is intended, is, in this age of general knowledge, too well known to require comment. The little work before us is from the pen of the inventor and patentee of the new mode for the application of heat and moisture to the skin, in lieu of the common poultice, either of linseed or bread. The work is divided into four chapters, in which we have a most complete essay on the structure of the skin—its uses—colour in different climes—its composition—description of the nails and hair—the functions of the skin—sensation and touch—its compensating action, secreting, and absorbing powers, &c. In these descriptions all technicalities and professional terms are, as much as possible, avoided, and the whole is rendered familiar to the simplest understanding. The two last chapters are devoted to a description of the advantages of the two descriptions of epithem, mentioned in the title—showing that, while the common poultices get dry, hard, nauseous, and irritating, these are soft, pliable, clean, and retain the warmth and moisture for a great length of time. The author points out the objectionable manner in which a large portion of children are dressed—the effects of sudden cold on the skin, with proper directions for prevention and cure of cutaneous diseases, under all circumstances—giving a number of cases in point, and the opinions of eminent medical men in favour of the invention. At the approaching season, when the often sudden change from genial weather to the most severe cold, has much more prejudicial effect on the general health, from its action on the skin, than is generally considered, we seriously recommend this little work to general perusal; it will not only be found useful, but highly interesting.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY, ALEXANDRIA, AND THE PENINSULAR PORTS.

PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA. 47

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civeta Vecchia, three times a month.

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.

A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

CALEDONIAN RAILWAY—NINTH INSTALMENT.—Notice is hereby given, that the directors of the CALEDONIAN RAILWAY COMPANY have made a CALL for an instalment of TEN POUNDS per share, being the ninth and final instalment, PAYABLE into one of the undermentioned banks, on or before Friday, the 1st of October next:—

LONDON—Messrs. Masterman and Co., 35, Nicholas-lane, Lombard-street.
LIVERPOOL—Messrs. Moss and Co.
MANCHESTER—Sir Benjamin Heywood, Bart., and Co. 48
BRISTOL—The National Provincial Bank of England.
NEWCASTLE-ON-TYNE—The Newcastle Commercial Banking Company.
EDINBURGH and GLASGOW—The Commercial Bank of Scotland.

Interest, at the rate of 5 per cent. per annum, will be charged on all calls not paid at that date.—No transfer of shares received at this office after the 7th inst., can be registered until the call is paid. J. W. CODDINGTON, Secretary.

Office, 122, Prince-street, Edinburgh, Sept. 1, 1847.

PARIS AND LYONS RAILWAY COMPANY.—The committee of management of the above company have the honour to remind the shareholders, that the THIRD PAYMENT, fixed at FIFTY FRANCS per share, must be made on and between the 5th and 20th inst., at the office of the company, No. 34, Rue de la Victoire, Paris. There will be deducted from the above amount 4 f. 75 c., being the balance of interest due on the 1st of Sept., arising as follows—viz.:

	f.	c.
1. From the third half-year's interest on 200 f., already paid	4	0
2. From interest for three months on the second payment of 75 f., this interest not having been included in the payment of the last half-year	0	75
Together	4	75

Thereby reducing the amount to be paid per share to 45 f. 25 c.

By this third payment, the five first tenths on the shares will be completed; and, according to the 8th Article of the Statutes, the provisional nominal certificates will consequently be exchanged for definitive bonds available to the bearer.

Messrs. N. M. ROTHSCHILD & SONS having been requested by the company to give publicity to the above advertisement, beg to inform the shareholders, that they are ready to receive the amount of the payment in question, and to forward the certificates of the shares to Paris, to be there exchanged in the manner above stated. 49

New-court, St. Swithin's-lane, Sept. 4, 1847.

PARIS AND LYONS RAILWAY COMPANY.—THIRD INSTALMENT.—Messrs. C. DEVAUX & CO. hereby inform the shareholders in the above railway, that a CALL of FIFTY FRANCS is PAYABLE between the 5th and 20th inst. (less 4 frs. 75 cts., interest up to 1st Sept., 1847); and they undertake, until further notice, to make the said PAYMENT, in PARIS, at the rate of £1 16s. 2d. per share, which includes commission and premium of insurance for the safe conveyance from Paris to London of the certificates to bearer. 50

London, 62, King William-street, City, September 11, 1847.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their IMPROVED PATENT ELASTIC METALLIC PISTONS. 51

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is:—

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

Just published, price 7s. 6d.,

INVENTIONS, IMPROVEMENTS, AND PRACTICE OF BENJAMIN THOMPSON, in the combined character of Colliery Engineer and General Manager, with some interesting particulars relative to Watt's Steam-Engine, and a short Treatise on the Coal Trade Regulation. 52

Newcastle: M. and M. W. Lambert, 69, Grey-street.—London: John Weale, 59, High Holborn; and at the Office of the *Mining Journal*, 26, Fleet-street.

Just published, second thousand of Vol. II.,

TURNING AND MECHANICAL MANIPULATION. By CHARLES HOLTZAPFFEL, A. Inst. C E., &c.

This work is intended for GENERAL REFERENCE and PRACTICAL INSTRUCTION on the LATHE, and the various MECHANICAL PURSUITS followed by AMATEURS.—To be comprised in six volumes.

VOL. I.—(Second Thousand)—ON MATERIALS, their differences, choice, and preparation, various modes of working them generally, without cutting tools. 53

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VOL. IV.—ON the PRINCIPLES and PRACTICE of HAND or SIMPLE TURNING.

Published by Holtzapffell and Co., engine, lathe, and tool manufacturers, 64, Charing-cross, and 127, Long-acre, London; and to be had of all booksellers.

The prospectus, with table of contents, free by post.

ENFEEBLED HANDS.—HOLTZAPFFEL & CO.'S PEN-HOLDER for ENFEEBLED HANDS.—Registered Sept. 16, 1846.—This instrument was invented by the late Mr. CHARLES HOLTZAPFFEL, for the use of those persons who, from age, rheumatism, gout, stiffness in the joints of the fingers, paralysis, or other infirmity, are deprived of the free use of the fingers, so that they cannot hold a pen in the customary position. The pen-holder is adapted to receive a gold, steel, or quill pen, at the option of the individual, and the instrument may be carried in the pocket, as it folds into the size of an ordinary pencil-case. Instructions for using the pen for enfeebled hands, with a diagram, free by post, on application to HOLTZAPFFEL & CO., engine, lathe, and tool manufacturers, 64, Charing-cross, and 127, Long-acre, London. 54

EAST COOMBE SILVER AND LEAD MINING COMPANY—In 4096 shares, at One Guinea per share.

CONDUCTED ON THE COST-BOOK SYSTEM.

BANKERS—The National Provincial Bank of England, Barnstaple.
SECRETARY—Mr. George Chowen. 55

The mines possessed by the company extend upwards of 800 fathoms on the run of the lodes, and about 200 fathoms in a cross direction, situate in the parish of Swymbridge, near Barnstable, being held under a lease of 21 years, at 1-15th dues. The lodes are parallel with those of the Combmartin Mines, and in every respect similar in their component parts, matrix as well as country (which latter is a kindly killas), and may be worked at an easy cost. The operations of the present company have been confined for the past two years to clearing up the old workings, sinking engine-shaft, extending levels, &c.; but it being deemed essentially necessary to erect a steam-engine, with the view of putting the mine to a greater depth, as also proving the north lode, it has been determined to extend the number of shares to 4096, with a payment of One Guinea per share, a considerable proportion of which will be taken by the present proprietors. It may be observed, that the mines may be worked for the next six or eight months without the aid of steam-power, there being a good water-wheel erected, but which can only be partially applied, from the top water falling off; during which time the north lode (the most promising one in the sett) can be intersected at the 10 and 20 fathom levels, and driven on at those points. The adventurers have lately secured a valuable addition to the sett, which considerably enhances the value of the property.

In working the mines, it is intended to adhere strictly to the Cost-book System; a finance committee being appointed, who will have control over the funds of the company, and see to their proper application; such committee to be appointed at the first meeting of the adventurers, and remain in office two months, when they shall be required to furnish a cash account of receipts and expenditure, as also the assets and liabilities, thus precluding the possibility of any adventurer being rendered liable beyond the two months' cost. The committee so appointed to be eligible to be re-elected, or others appointed in their stead, at any two-monthly meeting. The ore hitherto raised has been rich for silver, its value being £15 to £20 per ton. The mine is in a good working condition, with water-wheel, flat-rods, pumps, &c., the value of the machinery being estimated at £1200.

Parties who may take shares in the company, will have them free of any liabilities up to the present time.

The annexed report of Captain Williams, will convey general information as to the prospects which the mine presents.

REPORT.

I have inspected the East Coombe Mine, and beg to hand you my report. The mine is located in a stratum of rich blue killas. The lodes are parallel to those of the celebrated Combmartin Mine, and in similar strata of ground. A considerable quantity of ore appears to have been taken from the south lode. In the bottom of the 10 fathom level, a good branch of silver-lead ore is going down, and I have no doubt of your having a course of ore in this lode at the next level.

The north lode, however, in my opinion, is the most kindly one in the sett. The indications at the adit being of the most encouraging nature, I strongly recommend this lode being cut, with all possible dispatch, at the 10 and 20 fm. levels; and I confidently believe you will find it rich when intersected. The machinery is in first rate order, and well laid out. It is my firm conviction, that if a steam-engine were erected, and the working vigorously prosecuted, considerable returns might at once be made. J. WILLIAMS.

Applications for shares to be made to J. P. Gilbert, Esq., Manager, National Provincial Bank, Barnstaple; Mr. John Westacott, East Coombe Mining Office, Swymbridge; and the secretary, Mr. George Chowen, from whom prospectuses may be had.

ELECTRIC TELEGRAPH COMPANY.
LONDON, 345, *STRAND*, *September* 1, 1847.

COMMERCIAL TELEGRAPH.

The works of the lines for commercial communications, between the places enumerated below, embracing a SYSTEM of TELEGRAPHS for COMMERCIAL PURPOSES only, and distinct from that reserved for the special use of railways, being so far advanced as to admit of their completion by the commencement of the coming year, the directors think that the time has now arrived, when it becomes their duty to make known the arrangements which they contemplate for the accommodation of the public.

STATIONS will BE OPENED, in central situations, in the PRINCIPAL TOWNS, whence MESSAGES and DISPATCHES will be FORWARDED TO, and RECEIVED FROM, all the OTHER STATIONS of the ELECTRIC TELEGRAPH COMPANY.

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SHIP LISTS, from the various Ports.
SHARE LISTS, from the various Exchanges.
PRICES CURRENT.
STOCK EXCHANGE LISTS. 56
CORN MARKETS, from the various Towns.
PRICES OF LIVE STOCK, &c. &c.

In LONDON, a CENTRAL STATION, suited to the importance of the metropolis, is in COURSE OF ERECTION, in the immediate vicinity of the Bank and Royal Exchange; in this Station the whole TELEGRAPHIC NEWS of the COUNTRY will be CONCENTRATED, and FORWARDED in EVERY DIRECTION. And here, as in other towns, a ROOM will be RESERVED for SUBSCRIBERS.

The SUBSCRIPTION to these ROOMS will be TWO GUINEAS per annum, paid in advance, which will entitle SUBSCRIBERS to the RIGHT of ENTRANCE to ALL the SUBSCRIPTION ROOMS of the COMPANY—including the Central Station at London.

The foregoing details some of the advantages of the Commercial Telegraph to subscribers; but the requirements of the public in general will be provided for by the establishment of offices, which will at all times be open for the reception and transmission of messages and dispatches; while messengers will be kept at the various stations, by whom dispatches may be sent out to any part of the town where the communication has been received by Telegraph at the Company's Station.

Subscribers' Names are received at the Commercial Telegraph Office, where any further information may be obtained.

The following are the Towns to which the Commercial Telegraph will be first extended:—

London	Chester	Southampton	Derby	Darlington
Margate	Liverpool	Winchester	Nottingham	Newcastle
Ramsgate	Rotherham	Dorchester	Lincoln	Berwick
Deal	Barnsley	Bristol	Chesterfield	Edinburgh
Dover	Wakefield	Gloucester	Sheffield	Glasgow
Folkestone	Leeds	Cheltenham	Bradford	Scarborough
Canterbury	Halifax	Peterborough	Wisbeach	Bridlington
Northampton	Rochdale	Yarmouth	Lowestoff	Stamford
Coventry	Hull	Huntingdon	Cambridge	Norwich
Birmingham	Maidstone	Hertford	Chelmsford	St. Ives
Wolverhampton	Tonbridge	Manchester	Ipswich	Ware
Stafford	Gosport	Leicester	York	Colchester

J. LEWIS RICARDO, Chairman.

BRETT AND LITTLE'S TELEGRAPH.—We have now the satisfaction of referring to the unanimous opinions of the public press in favour of our ELECTRO-TELEGRAPHIC CONVERSER, and to inform those Railway Companies requiring a TELEGRAPH, that we are now prepared to GRANT LICENSES, without in any way restricting its application.—Terms may be known, and tickets to inspect obtained, by applying to BRETT & LITTLE, Furnival's Inn.

A descriptive pamphlet is preparing for publication. 57

VIADUCTS AND OTHER RAILWAY WORK.—The attention of Railway Engineers, Architects, and Contractors is particularly directed to the great advantages to be derived from the application of SEYSSEL ASPHALTE, as the *only impervious and permanent* covering for arches and roofs, and lining of reservoirs, gutters, &c. The arrangements of CLARIDGE'S PATENT ASPHALTE COMPANY enable it to execute works of any extent with the greatest promptitude.

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Information may be obtained as to all works which have been executed by the company since its establishment in 1838, which will prove that the failure of many works represented to have been done with the genuine material has resulted from the substitution of a spurious one. 58

I. FARRELL, Secretary,
Seyssel Asphalte Company, Stangate, London.

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W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY. 59

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

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FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 60

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK, Goswell Mews, Goswell-road, London.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS,
TUBES FOR STEAM, GAS, AND OTHER PURPOSES,
ALL SORTS OF GAS FITTINGS. 61

THE BIRMINGHAM PATENT IRON TUBE COMPANY,
42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,
MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld.

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WORKS—SMETHWICK, STAFFORDSHIRE.
LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.

LONDON AND PROVINCIAL JOINT-STOCK LIFE INSURANCE COMPANY.—The DIRECTORS invite the public generally, also BUILDING SOCIETIES and BORROWERS, through them or from other parties, to examine the peculiar system and striking advantages offered by this office.

Every description of life assurance, investment, and loan business transacted. 62

Low rates of premium and three-fourths of profits divided.

For prospectuses, &c., apply to JOHN MASSON, Secretary.

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Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates. 63

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
			1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 9	395 11 1
60	£1000	£0 3 4	1839	165 11 10	74 1 9	11 3 1	346 3 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 9	49 10 0	7 10 4	247 4 8

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. *September* 11, 1847.

*** It will at all times save much delay and inconvenience, if communications are directed simply To THE EDITOR, *Mining Journal Office*, 26, FLEET-STREET, LONDON.

And POST-OFFICE ORDERS, &c., must be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.